

Standardization

News Magazine of the American Standards Association, Incorporated



**American Standard Is Guide
to Woodworking Safety (pgs 88)**

MARCH 1951

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Nat Retail Dry Goods Assn
Nat Safety Council
Outdoor Advertising Assn of
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Oxychloride Cement Assn
Photographic Mfrs Group:
Ansco Div of Gen Aniline &
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Company Members—More than 2000 companies hold membership either directly or by
group arrangement through their respective trade associations.

Marginal Notes

Coordination Is the Keynote—

Authorities agree that coordina-
tion is the key to national success—
in easier and quicker production; in
conservation of materials and man-
power; in more efficient civilian de-
fense in case of attack; in more effec-
tive cooperation with our allies.

It is heartening, therefore, to find
evidence of acceptance of nationally
agreed upon standards to help co-
ordinate requirements affecting de-
sign and use of manufactured prod-
ucts in the 48 states. In this issue,
two reports show progress in use of
American Standards as state require-
ments—for woodworking machinery
(page 80) and for mechanical refrig-
eration (page 87).

In a related field, decisions of a
standing Committee of Judges (page
92) are bringing about nationwide
uniformity in collecting data about
industrial accidents as they occur.
These data dovetail into programs
now being set up to prevent human
loss through accidents on the home
front that take a toll comparable to
casualties suffered on the battlefield.
The Bureau of Labor Standards has
already made plans to help industry
check on why accidents happen and
eliminate the causes (page 90).

Coordination on a national scale
is matched by increased efficiency of
companies that coordinate their own
activities. Savings in time and
money experienced by one large
company through the use of stand-
ards in its purchasing operation
(page 77) are not unique to that
company. These savings multiplied
throughout the nation's industrial
plant gage the contribution of stand-
ardization's coordination technique
in effective use of the nation's re-
sources.

That this technique is good busi-
ness and offers value to customer as
well as manufacturer is evident in
the way advertisers are referring to
American Standards in advertising
their products (page 88).

General Eisenhower's recent trip has stimulated interest in coordination on an international scale. Close liaison is already being maintained on development of national standards with our neighbor to the north—Canada. This is being done in many cases through exchange of representation on standards committees. In this issue, Canada's setup for economical purchase of supplies (page 82), can be compared with the setup in the United States described by Willis MacLeod in the February issue of STANDARDIZATION.

A Signal Honor—

When Lester S. Corey received The Moles' award (page 85), G. F. Ferris who made the presentation pointed to the fact that "the award has become recognized as the highest and greatest honor that can be given an individual by the construction world." It is equivalent to the so-called "Oscar" in the motion picture industry—the Herman Trophy in football—or the most valuable player award in baseball. There can be no greater satisfaction for a man than to be singled out by those in the same business and given public recognition and honor for what he has done for his industry, Mr Ferris commented.

Our Front Cover

Woodworking machinery brings joy to the nation's population—to father working in his basement with saws and drills, to Small Fry pulling his gay wooden toy, and to sport enthusiasts who use skis, bowling balls, and many types of athletic equipment. The girl on our cover, drilling holes in a partly completed pull-toy, is one of the more than 11,000 workers employed in New York State to make wooden toys and athletic equipment. The fixed jig she is using protects her hands by preventing her work from slipping, and her goggles protect her eyes from flying chips.

Toy making is only one of the myriad woodworking industries that keep us supplied with a wide variety of things we need—furniture, shoe lasts, barrels and boxes, boats and railroad cars, pencils, musical instruments, and tobacco pipes, to name a few.—*Courtesy Industrial Bulletin, N. Y. State Department of Labor.*

Opinions expressed by authors in STANDARDIZATION are not necessarily those of the American Standards Association.

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Standardization is dynamic, not static. It means not to stand still, but to move forward together.

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Reg. U. S. Pat. Off.

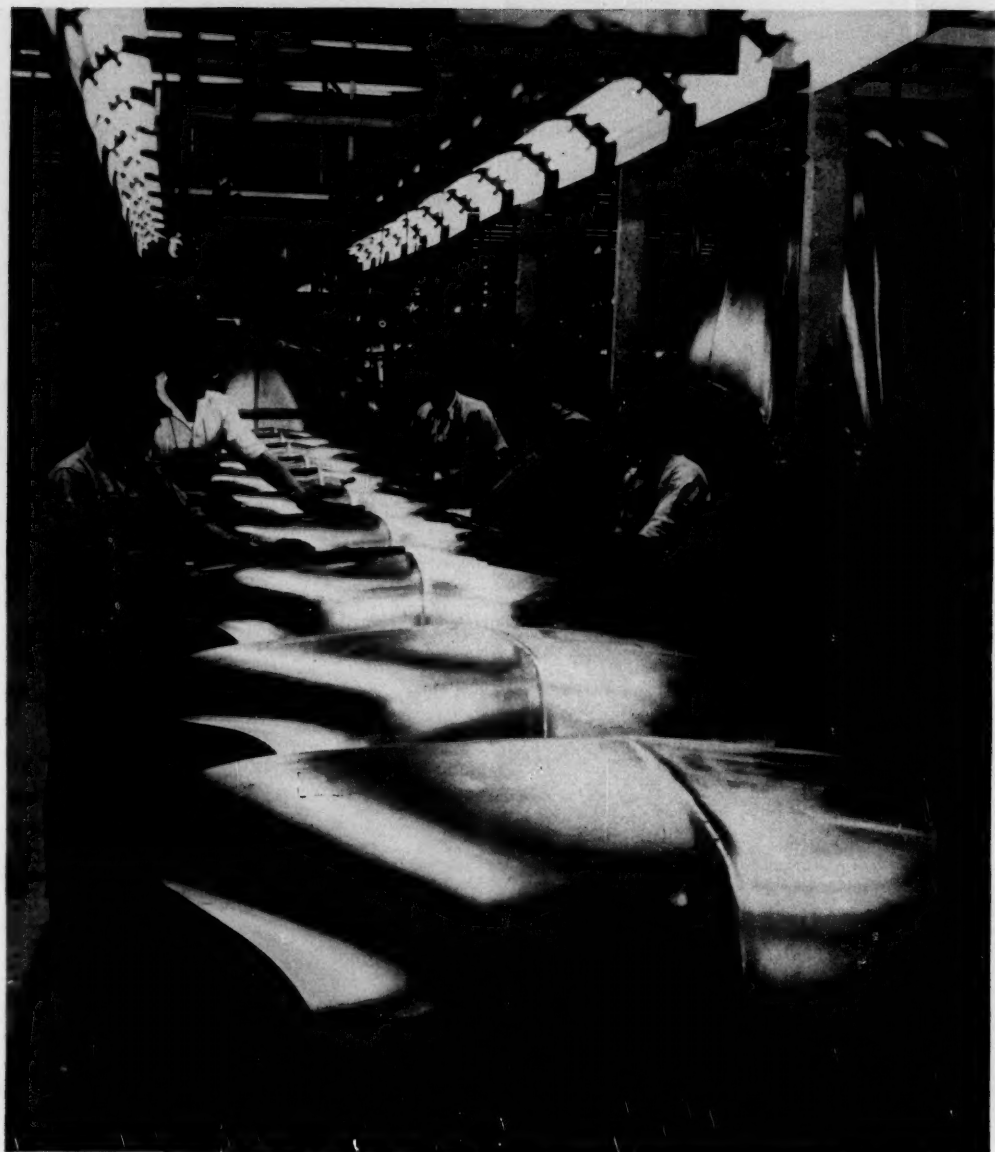
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Ford Motor Company

Hoods for Mercury passenger cars, on continuous conveyor, are ground, filed, and buffed before being degreased for painting at Lincoln Mercury's Metuchen, N. J. assembly plant. This is one of the plants where parts are assembled and installed. For example, the basic engine (page 77) is made at Ford's Rouge plant, Dearborn, Mich. Many operating accessories, such as fuel pumps, carburetors, and spark plugs, come from independent suppliers.

Benefits of Standards in Purchasing

This paper was presented at the session sponsored by the Committee on Standardization of the National Association of Purchasing Agents at the First National Standardization Conference, The Waldorf-Astoria, New York, November 28, 1950.

IN the Ford Motor Company, we in purchasing have been increasingly aware of the value of standards and specifications in the procurement of material. Our original standards dating back to 1916 covered mainly oils, paints, iron, and steel and proved to be valuable tools in their procurement. From this small beginning we have branched out into standards and specifications covering standard parts (such as bolts, screws, washers, nuts, etc), cutting tools, mops, brooms, electrical items, standardized methods of paint application, rubber cement and sealer applications, foundry raw materials, and steel mill raw materials to name only a few. Anywhere in our company that a standard can be developed—whether for a process, an operation, or a material—we are striving continually to develop a workable standard.

From the point of view of multiple sources of supply, availability, and cost there are increasing advantages in changing from standards which are company-wide to standards which are in use throughout an industry or the nation. For example, during the war Douglas Aircraft Company saved \$268 per plane on the simple item of bolts by changing from a special company design to an industry-wide standard. Westinghouse has saved \$25,000 in one year by reducing the varieties of metal washers in their inventory from 1350 to 150 and they also lowered their tool replacement costs. As a direct result of standardization studies, Detroit Edison Company developed a wheel for cutting firebrick and saved \$3,000 per year.

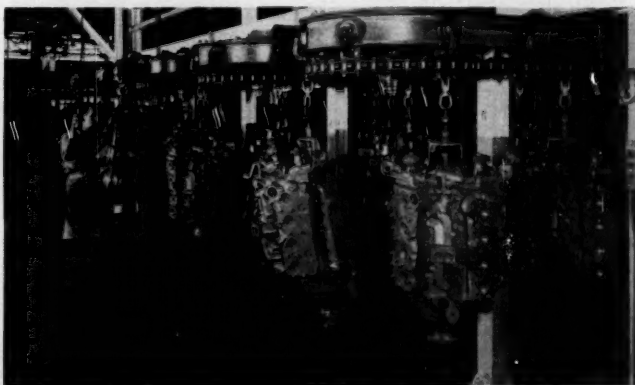
In our own company we have been making studies with the idea of

by **George M. Rice**
**Purchasing Department,
Lincoln Mercury Division,
Ford Motor Company**

changing special tools to industry standard tools. We have just completed a study on our Connecting Rod Operations where we were using a company standard drill with a special length of 2½ in. We changed to a 1⅞ in. standard length drill with shorter length flutes and used longer drill holders. This resulted in longer tool life and a saving of \$3,500 per year. Savings of this type have been substantial and most savings continue as long as the operation runs. New and additional possibilities for savings are constantly being investigated; at the present time tests are being conducted on form tools, drills, reamers, taps, broaches, and grinding wheels.

Another example of economies made possible by the use of industry standards versus company standards are carbon and graphite brushes for use on electric motors. Company standards list varying lengths of brushes, bevels ranging from 10 to

30 degrees, shunt lengths from 4 to 7 inches. Grade classification runs in six specifications. By the simple use of predetermined standards, recently established by the brush manufacturers working in conjunction with the motor industry, one brush of average length with shunt of 6 inches, and an average bevel between the high and low point, and using a good quality grade classification, would replace these multiple types. By this standardization in the industry the brush manufacturer can produce the requirements needed by customers on a yearly basis about 25 percent cheaper than previously. Deliveries are made promptly from stock whereas, in the past, four to six weeks was common practice. Such standardization has already shown results in the railroad industry. Formerly, the railroads carried approximately 900 types of brushes in inventory, but with this standardization the number of types has been cut to 323. The Detroit Edison Company has reduced its stock inventory from 485 types of brushes to slightly over 100 types. At the present time studies are being made in our company to utilize the brush standardization idea



Ford Motor Company

Engines for Mercury passenger cars are started through the engine assembly line at the Metuchen, N. J. assembly plant of Ford's Lincoln Mercury Division.

in our plants. From conservative estimates, this will save in the neighborhood of \$25,000 to \$30,000 a year.

Another Type of Standard

There is another type of standardization which each purchasing agent should carry on in his own plant; it differs greatly from the types of standardization previously discussed. There are a large number of items that will be purchased for use in the processing of the finished



Ford Motor Company

Seats and seat cushions are assembled on the "merry-go-round" production line, one of several independent assembly lines at the Metuchen plant.

From the purchasing point of view standards accomplish the following benefits:

1. The use of specifications and other standards simplifies and clarifies every step in the procurement process—from the planning stage to the mailing of the check in payment for goods.
2. Standard specifications are the result of much experience, trial and study, thus saving time and effort in determining needs.
3. Standards lower unit costs by making mass production possible because they allow materials to be made in large quantities in one set-up.
4. Standards enable buyer and seller to speak the same language and make it possible to compel competitive sellers to do likewise.
5. They broaden competition and promote fairness because comparisons can easily be made.
6. By eliminating unnecessary types, grades and sizes standards enable purchasers to operate on smaller inventories at less expense, to buy in more economical quantities, and to get better deliveries. Inventory is a very important item with every company. Large amounts of working capital can be tied up in inventories, and costly handling and rehandling can accrue from these excessive inventories.
7. Standards reduce the cost of maintenance and repairs because fewer parts and supplies have to be carried in stock.
8. Without standards no Purchasing Agent could function efficiently. Our industrial life as we know it would be impossible. Each simple purchase would require sketches, blueprints and pages of specifications.

product. They are used in the maintenance of your plant; and they are used in the handling of materials and shipment of the finished product. It is best that these items be kept to a minimum.

Let us assume, for example, that in the manufacture of your product you use a large quantity of portable electric drills. There are quite a number of reputable companies that make top quality electric drills to fill your requirements. If in June you buy 12 from company A, and in July you buy 12 from company B, then in August you buy 24 from company C, you may feel that you have done a good job of buying. But have you? First, since you do not throw this tool away at the first breakdown, you have presented your company with a complicated service problem. It will be necessary to carry service parts in stock so that repairs can be made promptly. You now have three different manufacturers' products, so you must carry three sets of parts; therefore, your inventory of service parts is large, and you have a lot of money tied up. Secondly, have you purchased these drills at the lowest price possible? Since each purchase was made on small quantity, you probably lost a quantity discount that would be allowed for a larger order. A far better way to buy these drills would be to consider the purchase for a period of six months at a time. You could then call the representatives of the various sources of supply and have them quote a quan-

tity price to be delivered during the next six months. As a result you would have the benefit of a better price and you would have to service only one make of product.

Further Examples

As another example, let us assume that you use a large quantity of shipping containers of various sizes in the shipment of your products. Each size was adopted, no doubt, to be used in shipment of one item. This made you carry a sizable inventory and tied up space and money. If a study were made of all items shipped, you could no doubt standardize on two or three sizes, or maybe on one size, by varying the quantity of each item placed in the container. As a result, larger purchases of a lesser number of containers could be made with substantial reductions in price. About six months ago we were in the process of doing just these things. A survey was made in our Service Parts Section which resulted in a reduction from 145 cartons to 60 cartons and savings of \$15,000 per year.

In our Purchasing Department we conduct weekly cost review meetings on price and product analysis of production items for the purpose of maintaining price levels and to see if manufacturing procedures or material substitutions can be made that would allow us to reduce our prices or conserve on critical materials. In the past, no planned program had been made on nonproduction items for this type of review. Recently it

was decided to extend this activity to the M.R.O. materials.

About six months ago 38 plants and branches making local purchases of nonproductive items were requested to submit samples of a selected list of 400 items they were buying at their plants. Each item on the list had the following information tagged to the part:

Description
Vendors' names
Quantity of last order
Date of Purchase
Price

The items were submitted and placed on display and were segregated as to commodity, price, and price ranges shown.

Our preliminary studies showed the need of specifications and standards on many items and the necessary procedure has been initiated to obtain them. A wide variation in price existed due to differences in quality, quantity, delivery requirements, availability, etc. We are trying to evaluate these as to standards that can be developed so that every branch can obtain the best quality merchandise at the best price to be used on comparable jobs.

At this stage we called upon our standards people to inspect the display for their ideas and suggestions as to how and what should be standardized.

The apparent need for standardization on many items other than tools warranted the establishment of

several subcommittees to handle these functions. The General Managers of the various divisions were requested to appoint qualified representatives to these subcommittees in order that the experience and knowledge of the best qualified people throughout the company might be utilized in considering the establishment of standards on these various subjects. The functions of the subcommittees are:

1. Decide what should be standardized
2. Assign responsibility for research
3. Reject or approve recommendations
4. Submit approved recommendations to the company standards committee who will authorize final processing and publication in the standards manual

The subcommittees that have been formed cover:

1. Metallurgical
2. Supply
3. Gages
4. Tools
5. Abrasives
6. Welding
7. Hydraulics
8. Press Room
9. Electrical
10. Lubrication
11. Conveyors and Automation

At the present time studies have been completed on paint brushes, gloves,

hack saw blades, and hammers and handles which will be included in the Standards Manual in the very near future.

Other items under study are:

Brooms, screw drivers, wrenches, files, shovels, boots and shoes, flashlights, welding rod and fliers.

From the standardization program on supply items just described our company will save several hundreds of thousands of dollars, and get a better product into our plants to do many jobs required with less effort.

The personnel responsible for the procurement of materials of any organization, large or small, can be helped immeasurably by following the general principles for a standardization program outlined above. The smaller companies cannot perhaps maintain specialized personnel, but they can refer to Government specifications, American Standards, ASTM or comparable standards, catalogs of manufacturers, and to specifications and standards set up by the basic industries of the country.

As time goes on, the Purchasing Agent who places his confidence in a well organized standards program will find he is doing the best possible job for his company.



Ford Motor Company



Ford Motor Company

Above—Completed body of passenger car drops to meet chassis moving on final assembly line. The Metuchen plant is one of four Lincoln-Mercury Division Assembly plants in the United States.

Left—Mercury bodies pass through water spray toward "wet rub" deck. Spraying and rubbing precedes painting of the final finish coat.

American Standard Is Guide to Woodworking Safety

SIX states have adopted the American Standard Safety Code for Woodworking Machinery in full, and 17 others follow it in part. There is still need, however, for greater uniformity in state safety regulations for woodworking machinery before manufacturers will be able to design a machine or guard acceptable to all states. These are the findings following a survey of state safety requirements for woodworking machinery carried out by the Bureau of Labor Standards, U.S. Department of Labor, in cooperation with state labor departments. The survey was part of a program to determine how adequately the states

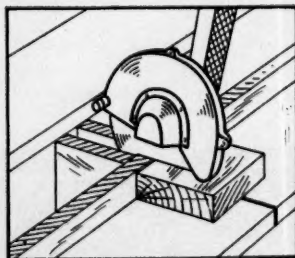
handle safety problems and how well their regulations cover technical details with reference to recognized safety standards. It was requested by the Committee on Engineering of the President's Conference on Industrial Safety.

The Bureau's report recommends that states having no codes for woodworking machinery adopt minimum safety standards, and calls attention to the fact that adoption by all states of the American Standard Safety Code for Woodworking Machinery would eliminate variations.

Woodworking machinery was chosen as the subject of this first survey by the Department of Labor

for several reasons. In the first place, woodworking machinery is used so widely that its safe operation is a problem in every state. Second, it offered a good field for study since a great deal of effort has been spent in working out adequate safeguards. This is due to the fact that injuries from the use of woodworking machinery are likely to be more severe than they are from the use of most other machines.

The American Standard Safety Code for Woodworking Machinery was chosen as the nationally accepted and impartial standard with which state codes could be compared. Prepared by a sectional committee organized under the procedure of the American Standards Association, this safety standard was agreed upon by equipment manufacturers, safety groups, users of woodworking machinery, employees, insurance groups, and government representatives. The International Association of Industrial Accident Boards and Commissions and the National Conservation Bu-



NYS PIX-Labor, Courtesy, Industrial Bulletin

The swing saw pictured at the left is hooded and is used in many plants throughout the country without mishap. However, the line drawing above shows the hood called for in American Standard O1.1 Not only is the top of the blade covered in this standard hood, but the lip itself rests upon the material being cut and the end of the arbor is covered as well. Such coverage greatly reduces the chance of accidents.

reau sponsored the committee's work. Approval of the standard by the American Standards Association certified that a consensus had been reached by all groups concerned.

The Bureau of Labor Standards' survey showed that:

Alabama, Colorado, Georgia, New Jersey, North Dakota, and Rhode Island have codes that are identical with or equivalent to the American Standard Safety Code.

17 states and the District of Columbia have woodworking machinery safety codes, some of which are less restrictive and some more restrictive than the American Standard.

22 states do not have a woodworking machinery safety code of any kind.

3 states had not completed their code requirements at the time the survey was made.

Of the 17 states that have codes that differ from the American Standard, it was found that the majority differ in rules that are of relatively little importance. A lesser number contained major variations involving a few important rules.

The report of the survey as published by the Bureau of Labor Standards, U.S. Department of Labor, includes four sections: (1) a list of the states which have no standards for guarding woodworking machinery; (2) a list of states whose standards are identical with or equivalent to the American Standard; (3) a list of individual rules of the American Standard with a list of states whose code requirements are less restrictive or more restrictive than the American Standard requirements; (4) a comparison of the requirements of the rules under the American Standard with the requirements under state codes, indicating which state standards are less restrictive and which are more restrictive than the American Standard.

This report is only the first step by the Bureau of Labor Standards to carry out the recommendations of the Committee on Engineering of the President's Industrial Safety Congress. Arrangements have been made to continue the analysis of safety codes for other equipment or working conditions, the Bureau announces. The Bureau is working with the state labor departments in making the surveys.



NYS Pix-Labor

This guard swings out horizontally to permit work to pass; American Standard O1.1 recommends that guard adjust vertically.



U. S. Dept of Labor, Courtesy, Safety Maintenance & Production

The hood above the circular saw meets every safety requirement and has been widely accepted by manufacturers throughout the U. S.



Weyerhaeuser Timber Company, Courtesy, Safety Maintenance & Production

This "push stick" makes it possible to pass the work by the circular saw without bringing the operator's hands close to the saw blade.

Canada Organizes for Economy

Excerpts from Canadian Government Specifications Board report. Reprinted by special permission of the publisher, the Division of Building Research, National Research Council.



IN 1934 the Royal Commission on Price Spreads requested the National Research Council to determine the extent to which specifications were being used by the various Federal Government departments in the purchase of supplies. It became apparent from this investigation that valuable economies could be achieved through collaboration in this respect. On 31 May of that year, an Interdepartmental Conference recommended that a committee be formed for the purpose of preparing specifications for purchasing purposes. This led to the formation on 13 June, 1934, of the Canadian Government Purchasing Standards Committee under the auspices of the National Research Council, which, in virtue of the powers granted to it by the National Research Council Act, 1924, has broad jurisdiction in the fields of

specifications and standardization.

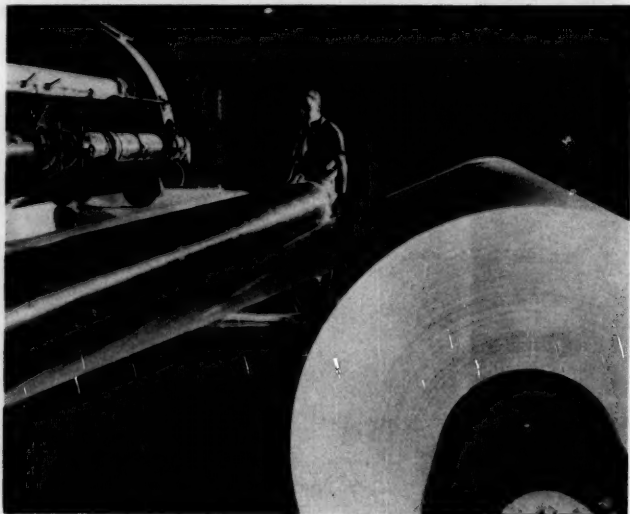
The technical and secretarial work was originally assigned to the Codes and Specifications Section of the Division of Research Information. As a result of some changes in organization, the Section was separated from that Division, and in August, 1947, it became a part of the Division of Building Research. On 1 September, 1948, the name of the Committee was changed to *Canadian Government Specifications Board*.

The Board is composed of the Deputy Heads of the interested departments of the Dominion Government, with the President of the National Research Council as chairman, and the Head of the Codes and Specifications Section of the Division of Building Research of the Council as secretary.

The function of the Board is to un-

dertake, at the request of Government departments, the preparation of specifications in commodity fields and for materials in which any one of these departments may be interested, and for which no standards have been published by the Canadian Standards Association. In addition, and as a necessary supplement to this undertaking, the Board may arrange for such testing and research work to be carried out as may be required for developing information to be used in the preparation of suitable specifications. In some respects the functions of the Board are similar to those of the Federal Specifications Board of the Federal Bureau of Supply of the Treasury Department, United States of America. [Now the Federal Supply Service, General Services Administration.]

So that duplication of effort in the field of specifications and standards may be avoided, the Board cooperates closely with the Standards Division of the Department of Trade and Commerce and with the Canadian Standards Association. The latter is essentially an industrial body designed primarily to take care of industrial interests in respect to standardization in this country. It was originally entirely divorced from governmental activities. While still an autonomous body, it now receives financial assistance from the Federal Government through the National Research Council. Relations between this Association and the Board have been close and cordial at all times, but in order to formalize the understanding between them, and to help those who may not be entirely familiar with the situation to realize, at least in part, the difference between



Canadian National Film Board

Pulp and paper products are one of Canada's prime exports. Above, a jumbo roll of newsprint is being slit into required sizes.

their respective functions, the Association and the Board have recently entered into a working agreement. This reads as follows:

"It is jointly agreed by the Canadian Standards Association (CSA) and the Canadian Government Specifications Board (CGSB) that:

"(a) The CGSB will initiate projects only on the request of governmental agencies.

"(b) When consideration of Government policy permits, the CGSB will refer to the CSA all requests for the undertaking of new projects. In such cases, if it is agreed that the project will be of general public interest, it will be undertaken as a CSA project. If it is agreed that the project is of interest only to Government departments, it will be undertaken as a CGSB project, and the approach to industry for specification committee representation will be made after consultation with CSA.

"(c) Where special considerations require that a project of general interest be undertaken as a CGSB project, the specification committee will be established after consultation with CSA. When the emergency has been met, resulting specifications may in due course be put through the regular CSA procedures and issued as CSA standards, at the discretion of CSA.

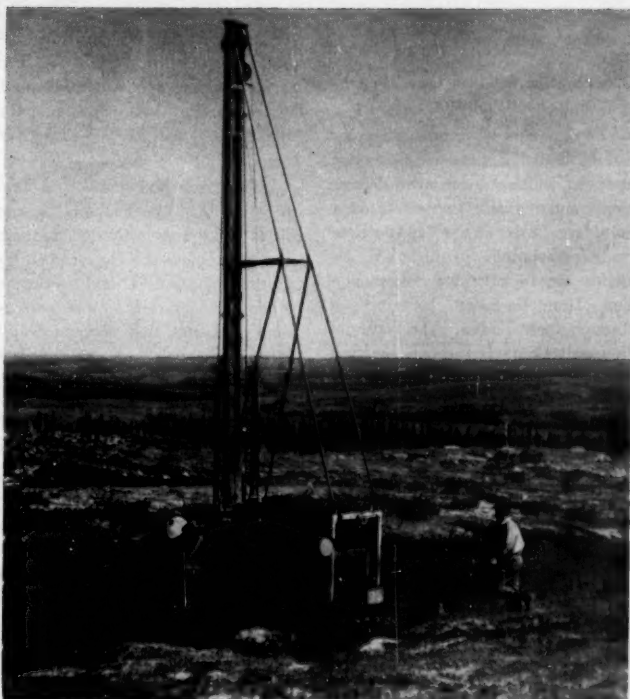
"(d) The CGSB will price all specifications published by the Board, and will make a charge for copies supplied outside the Government services and agencies, unless otherwise requested by a Government department.

"(e) The CSA and CGSB will make available to each other lists of members of existing specification committees. The CSA will place CGSB on its routine circulation list to receive similar information in regard to all new CSA committees and changes in committee personnel, as is now done for members of the Executive Committee. Similarly, when considerations of Government policy permit, the CGSB will make available to CSA a list of the members of each new specification committee.

"(f) When a member of a Government department is desired as a member of a CSA specification committee, the request will be made after consultation with CGSB.

"(g) When CSA is requested to prepare specifications for materials for which specifications have already been issued by the CGSB, it will consider the adoption of the latter for publication as CSA standards."

The Standards Division of the Department of Trade and Commerce administers the application of the Weights and Measures Act, the Electricity Inspection Act, the Gas Inspection Act, and the Precious Metals Marking Act. Recently, its terms of reference have been enlarged to include administration of certain sec-



Canadian National Film Board

Chain drill at iron ore deposit north of Burnt Creek, Canada. Rich Ungava ore in Canadian hinterland is vital factor in North American steel economy.

tions of the Dominion Trade and Industry Commission Act having to do with commodity standards. This latter activity pertains to the establishment and administration of regulations governing the application of the trade-mark "Canada Standard."

Close contact is also maintained with the Federal Specifications Board, Washington, and the standardizing bodies in the Commonwealth nations by means of reciprocal exchange of publications. Relations have also been established with the American Society for Testing Materials, and with the American Standards Association.

The technical work of drafting and revising specifications is carried out by committees appointed for each commodity field in which the preparation of specifications is undertaken. Originally, the members of these groups were drawn from departments interested or able to give assistance, but in due course, the ac-

tive cooperation of industry was obtained, and most committees now have industrial representation.

New projects may be undertaken as a result of suggestions, enquiries, or requests regarding the need of specifications in a particular commodity field. These are investigated, and if sufficient interest is found to exist, a conference is called on the authority of the chairman of the Board. Recommendations of such conferences are submitted to the Board for approval. When it is decided to proceed with a new project, a committee is organized and the scope of work to be undertaken is defined. When necessary, technical subcommittees and panels are appointed to deal with specific aspects of the work, and to prepare preliminary draft specifications as required. After a specification has been developed to a point where all collaborators are in agreement, it is submitted to the Board for ratification. The specification is then issued

and copies made available to all those interested.

Cooperation Between Government and Industry

The Canadian Government Specifications Board is thus a cooperative body in which Government departments and industry participate on a voluntary basis. Where appropriate trade associations or technical societies are in existence, representation from industry is arranged through these bodies. The National Research Council, through the Section of Codes and Specifications of the Division of Building Research, provides the machinery for organizing required work and coordinating all activities, and supplies the secretariat as well as the facilities for production and distribution of specifications. These specifications are not mandatory, and while intended primarily for use by Government departments have received fairly wide acceptance generally.

The machinery which has been developed is sufficiently flexible to deal with a variety of specification projects, as may be seen from the list of committees, subcommittees, and panels that are functioning at present. These groups also give considerable attention to methods of testing and procedures. In addition, a Committee on Plans and Administration serves as a general advisory body.

Committee Organization

There are at present some 30 committees functioning in as many commodity fields, with 25 subcommittees and 20 panels responsible for various aspects of the specification work. While some of these have been organized only recently, others were appointed several years before the war. Since the end of hostilities, a number of the older committees have been reorganized and the specifications under their jurisdiction reviewed. The remainder are taking similar action as time permits and occasion requires. It is intended to bring up to date all specifications issued prior to and during the early part of the war.

In some of the commodity fields

mentioned, no specifications have as yet been issued. The committees recently organized to work in this field have, however, a considerable number of specifications under preparation, some of which will be issued in the near future.

It has been laid down as a fixed principle that specifications be kept up to date, and criticisms, together with suggestions for changes and improvements, are always welcome. When consideration of such submissions indicates that changes would enhance the value of any specification, suitable amendments or complete revisions are issued.

Assistance to Users

The Committees on Paints and Pigments, Soaps and Detergents, Petroleum and Associated Products, Textiles, and Waxes and Polishes have compiled test methods and procedures which are published as separate schedules available to those using the specifications or otherwise interested. In addition, handbooks or manuals, to assist users in the selection of specifications and in the use of the materials these specifications describe, are in the course of preparation.

The Committee on Petroleum and Associated Products supervises the operation of a cooperative Gasoline Exchange and a Cooperative Lubricant Exchange in which the number of laboratories participating is 23 and 15 respectively. Monthly samples are distributed to provide the laboratories an opportunity for comparing test results and procedures as well as checking the analytical technique of laboratory operators. Governmental, industrial, and commercial laboratories are welcome to participate on a cooperative basis and without charge for the reports.

The Committee on Paints and Pigments has recently inaugurated a similar cooperative exchange in which 10 laboratories are thus far participating quarterly. The results obtained from the tests on the limited number of samples distributed to date have already afforded a valuable means for comparing the reproducibility of results with several

types of apparatus, as well as the accuracy of a number of procedures.

The practicability of instituting similar cooperative programs in the fields of soaps and textiles will be given early consideration.

Very close contact is maintained with the Department of National Defence and work is being carried out on behalf of, and in cooperation with, the various branches of the three services. This applies in particular to the Directorate of Inter-Service Development at whose request many specifications have been revised, coordinated, and issued on its behalf and under its own designations, and to the Directorate of Inspection Services.

At the request also of the Department of National Defence, there has been recently undertaken a project on food specifications in which the Specifications Subcommittee of the Inter-Service Committee on Nutrition is cooperating.

A List of Specifications is published annually, and is kept up to date with supplements during the year.

Availability of Specifications

A survey of the mailing lists indicates that federal, provincial, and municipal agencies are receiving specifications in most of the commodity fields. It is anticipated that the interests of these agencies will be served on an even broader scale as the work of the Board grows in response to an increasing manifestation of the desire of purchasing authorities to base procurement upon specifications.

Among the responsibilities of the National Research Council listed in the Research Council Act,¹ are those set forth in the following paragraphs of Section 10(c):

- (iv) The investigation and determination of standards and methods of measurements, including length, volume, weight, mass, capacity, time, heat, light, electricity, magnetism and other forms of energy; and the determination of physical constants and the fundamental properties of matter;

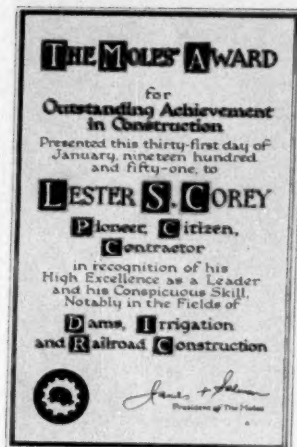
(Continued on page 96)

¹(Passed 19 July, 1924, amended 10 June, 1946, appearing as Chapter 177 of the Revised Statutes of Canada, 1927.)

The Moles Honor Lester S. Corey

LESTER S. COREY, member of the American Standards Association's Board of Directors, has just received a signal honor. The Moles, national organization of men in the heavy-construction industry, selected him as the non-member to receive its 1951 Award for outstanding service to construction. The award was presented "in recognition of his high excellence as a leader and his conspicuous skill, notably in the fields of dams, irrigation, and railroad construction."

Mr Corey is president and general manager of the Utah Construction Company. "During the last 20 years he has distinguished himself in the



construction industry in the West and has been associated with most of the outstanding western heavy construction projects during that time," the Moles pointed out in announcing the award. Some of the jobs which have had Mr Corey's attention include Boulder Dam, Deadwood Dam (Idaho), Guernsey Dam (Wyoming), Bonneville Dam, Grand Coulee Dam, and the east foundations of the San Francisco Bay Bridge. Mr Corey also has helped manage many outstanding railroad jobs.

Among others who have been honored by the Moles in past years have been Herbert Hoover and E. A. Prentis, former president of ASA.

Standards in the United Nations

Several suggestions for international standards have been considered recently by groups connected with the United Nations, according to a Report on Consultative Relationship between ISO and the United Nations. The report, prepared by E. A. Pratt, representative of the International Organization for Standardization at the UN, was issued by ISO.

The Subcommittee on Statistical Sampling believes that standards should be set up for raw materials produced by small-scale producers engaged in international trade. Recognizing that raw materials are inherently variable in composition, the subcommittee suggests the use of statistical sampling procedures in setting up such standards. Its proposal was made to the Statistical Commission of the United Nations.

As part of a proposed Handbook of Research Institutions dealing with building problems, the United Nations has issued a Directory of Building Research Organizations in

Europe (document E/ECE/121). Four of the national standards associations are included: Norway, France, Ireland, and the Building Section of the Swedish association.

The construction, repair, and maintenance of roads in the Far East has been receiving the attention of a Committee of Experts on Inland Transport. Asked to look into what "standardized technical and other characteristics" might be usefully adopted to secure uniformity in the construction of highways, the Committee of Experts has come up with a report on "The Most Economical Methods for the Construction, Repair, and Maintenance of Roads, Including Standardization and Other Characteristics, and Comparative Methods of National Financing." The study has been submitted to the Economic Commission for Asia and the Far East.

One chapter of the study is devoted to design standards for national highways and for provincial roads. No at-

tempt was made to set design standards for urban streets and roads, because of variability of requirements.

Another chapter contains an outline for standard specifications, including both general requirements and construction details.

An appendix summarizes the design standards in use in Burma, Ceylon, Indonesia, Malaya, Thailand, and South Viet-Nam. The extent of use of international road signs in Burma, Ceylon, India, Indonesia, and South Viet-Nam is also described in an appendix.

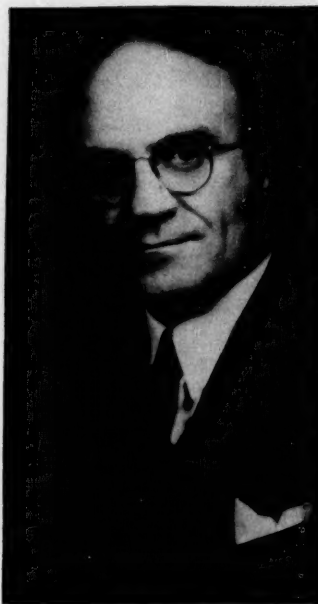
Proposed road signs and signals for international use are illustrated in the recently published report of the United Nations Conference on Road and Motor Transport held at Geneva in August and September 1949. The report, known as "Final Act and Related Documents 1950. VIII.2," may be purchased from any United Nations Sales Agent. It is in three languages—English, French, and Spanish.

Potter Honored for Standards Services

EDWIN E. Potter, vice-president in charge of contacts and relations with the U.S. Government for the General Electric Company, was awarded a special certificate for his outstanding service in standardization by the American Standards Association, February 2. Vice-Admiral G. F. Hussey, Jr, managing director of ASA, presented the certificate to Mr Potter on behalf of the Association.

Mr Potter, a member of ASA's Board of Directors for one year (1949-1950), received the certificate in appreciation of his contributions to standardization, not only in his own company and industry, but particularly in development of American Standards. The award recognized his service in policy-making in support of the standards movement as a means of advancing the national economy.

Mr Potter has been greatly interested in standardization in the electrical field for many years. He has been a vice-president of GE since 1945, and prior to that, was associated with their lamp department. He has also been active in the work of



the National Electrical Manufacturers Association as vice-president, member of the Board of Governors, and member of their Committee on Safety Regulations.

In presenting this award, Admiral Hussey declared, "American industry is far better equipped today than ever before to convert its output to military production. Management's increased emphasis on integrated standardization has been largely responsible for our improved situation. If the requirements of emergency mobilization are to be met, standardization activities must keep pace with the rapidly changing economic and technological demands. If it doesn't we'll be back where we were ten years ago.

"Experience in World War II exposed the woeful lack of nationally coordinated standards, particularly at the government level. Money, materiel, manpower, and precious time were sacrificed at heavy cost for want of adequate standards. The American Standards Association helped fill this gap with about 500 standards that contributed to the war effort, 160 of which were requested by the Army, Navy, and other military and civilian agencies. The subsequent conversion of wartime standards for peacetime use is providing a reservoir of basic industrial data for speedy mobilization."

Decision on Copper Resistivity

The International Electrotechnical Commission has announced its decision on the standard value for resistivity of copper. The decision was made necessary by a change from international to absolute electrical units adopted last year in most countries. The IEC statement was prepared by Dr E. C. Crittenden, for many years a member of the U. S. National Committee of IEC. Dr Crittenden has just retired as associate director of the National Bureau of Standards.

Statement issued by International Electrotechnical Commission, prepared by Dr E. C. Crittenden—

One of the important early accomplishments of the International

Electrotechnical Commission was the establishment of a standard value for resistivity of copper. This was agreed upon in 1913 and was announced in 1914 by IEC Publication No. 28, International Standard of Resistance for Copper (Specification International pour le Cuivre-Type Recuit). The value accepted was $1/58$ ohm square millimeter per meter, at 20C, or in decimal notation 0.017-241. A revised edition of Publication No. 28 was issued in 1925, but it retained the same numerical values.

The ohm in this specification was of course the international unit although not so named in the

publication. The change recently made in practically all countries from international to absolute electrical units raised the question whether the numerical value in the copper standard should be changed. The IEC Committee of Action at its meeting in Paris, July 21, 1950, in accordance with the views expressed by various National Committees, decided to take the "ohm" in the specification as being the absolute ohm, that is, to leave the publication unchanged even though the unit is slightly different.

As reasons for this decision it was noted that the specification calls for a statement of the con-
(Continued on page 103)

Refrigeration Standard Widely Used

Cyrus W. Miller, Executive Secretary, Refrigeration Industry Safety Advisory Committee, told refrigeration manufacturers and service engineers recently that the American Standard Safety Code for Mechanical Refrigeration is widely used, and told them why this would be a help to them. Mr. Miller spoke at the Refrigeration and Air Conditioning Educational Exhibit and Conference, Dallas, Texas, January 28, 1951.

UNIVERSAL use of a national standard by all in the trade is like talking the same language. A national uniform safety code for mechanical refrigeration fits in the same category. With universal adoption of such a national safety code you may be assured that, whether your work is being done here in Dallas, Cleveland, Detroit, or New Orleans, the rules governing the safe installation and use of refrigeration equipment will be the same. You will know that when your work is done in accordance with the national safety code, the installation has been made so that persons and property are adequately safeguarded in the use of such mechanical refrigeration equipment.

The American Standard Safety Code for Mechanical Refrigeration has been adopted by some 30 cities, which includes the larger ones—Detroit, Cleveland, Pittsburgh, San Francisco, New Orleans, Memphis, Toledo, Akron, and others. Of the 42 cities in the United States of over 200,000 population there are only four cities whose codes are at considerable variance with the B9.1—New York, Chicago, Los Angeles, Newark, N. J. The rest of the 42 cities either have the B9 standard in some form or are now revising their codes and considering it. This is true with the exception of six of these cities, which consider mechanical refrigeration so safe that none of them have regulations governing its installation and use.

The B9 standard is also included in the Ohio State Refrigeration Code, in the Indiana State Code for air conditioning, the Maryland State Refrigeration Code, and in the Recommended State Building Codes for Connecticut and Kentucky. It is included in the National Building Code of the National Board of Fire Underwriters, and in the Uniform Building

Cities That Use American Standard Safety Code For Mechanical Refrigeration, B9

City and State	Edition
Akron, Ohio	1939
Berkeley, California	1939
Cincinnati, Ohio	1939
Detroit, Michigan	1939
East Hartford, Connecticut ..	1950
Elizabeth, New Jersey	1930
El Paso, Texas	1939
Eugene, Oregon	1950
Ft. Lauderdale, Florida	1950
Ft. Worth, Texas (thru the NBFU)	1939
Grand Rapids, Michigan	1939
Great Falls, Montana	1939
Hartford, Connecticut	1939
Kansas City, Missouri	1939
Long Beach, California	1930
Los Angeles, California	1939
Macon, Georgia	1939
Memphis, Tennessee	1939
New Orleans, Louisiana	1939
Oakland, California	1939
Peoria, Illinois	1930
Philadelphia, Pennsylvania ..	1939
(thru the NBFU)	1939
Pittsburgh, Pennsylvania	1950
Pottstown, Pennsylvania	1939
San Francisco, California	1939
Shreveport, Louisiana	1950
St. Louis, Missouri	1939
Toledo, Ohio	1950
Washington, D. C.	1939
Wichita, Kansas	1939
Yonkers, New York	1930
Youngstown, Ohio	1950

States That Use American Standard B9

Ohio State Code	1939
Maryland State Code	1939
Indiana State Code for Air Conditioning	1939
Recommended Connecticut State Code	1939
Recommended Kentucky State Code	1939

National Building Codes That Incorporate American Standard B9

Uniform Building Code (Pacific Coast Building Officials)	1939
Basic Code (Building Officials Conferences of America)	1950
National Building Code (National Board of Fire Underwriters)	1939

Code of the Pacific Coast Building Officials. This Uniform Building Code has been adopted in over 300 municipalities throughout the country. However, they do not all have refrigeration safety code enforcement agencies. The 1950 edition of the American Standard Safety Code for Mechanical Refrigeration is included in the Basic Code of the Building Officials Conference of America.

Seven cities have adopted the 1950 edition of B9: Eugene, Oregon; Ft. Lauderdale, Florida; Lancaster, Pa.; Pittsburgh, Pa.; Toledo, Ohio; East Hartford, Connecticut; and Shreveport, Louisiana.

The advantages of a safety code are greatly lost unless it is kept up-to-date. To this end, an Interpretations Subcommittee of the B9 Sectional Committee has been designated. Members include: E. T. Benson of Frigidaire as chairman; John C. Rehard, Safety Engineer of the City of Detroit; J. R. Chamberlain of the York Corporation; L. J. Wallace of New Haven; and S. V. James of Underwriters' Laboratories, Inc., Chicago; M. C. Turpin, secretary of the American Society of Refrigeration Engineers, serves as subcommittee secretary. Their duties consist of answering requests for interpretation of the safety code and recommending to the ASA B9 Sectional Committee such revisions as they deem advisable.

While a few of the cities listed have modified the B9 standard, the majority have adopted it in one of three ways. Some have adopted it by reference, referring to a definite edition of the code. (This is acceptable in some states but not in others.) Others have adopted it by writing it into the local building code or ordinance word for word. Still others have established, in a law or ordinance, a definite and fixed standard of duty and then provided that compliance with the American Standard Safety Code for Mechanical Refrigeration shall be considered as prima facie evidence that the installation satisfies the standard of duty.

American Standards for Good Business

Advertisers are discovering a simple truth—that an American Standard is good value. These ads tell prospective purchasers that products meet requirements agreed upon by users themselves as well as by manufacturers, distributors, and technical experts. They cash in on the demand of prospective purchasers that products they buy perform according to recognized standards, that parts are interchangeable, and that they can be used safely. "American Standards" provide that assurance. They represent the experience and need of all groups concerned and are the product of give-and-take between manufacturers, users, distributors, and technical experts. The term "American Standard" means consensus—agreement by all concerned.

Coming soon!

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SAFETY

2-Wire, 3-Pole Grounding Plug Receptacle

for OBROUND CONDULETS

It gives you a positive ground circuit and will not accept ungrounded plugs.

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CROUSE-HINDS COMPANY Syracuse, N.Y.

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Quiet Transformers

MAKE GOOD NEIGHBORS!



In New Sound Laboratory
Allis-Chalmers Engineers Track
Down Causes of Transformer Noise

For 30 years in this sound laboratory engineers have a job they like. They use first-class equipment, glass walls and soundproofing to study the cause of transformer noise. They keep noise level down to 27 decibels.

Here, Allis-Chalmers engineers investigate noise, make sound level tests, get data used in designing low sound level transformers. Even the most minute detail is considered. They check into construction, clamping, ways of attaching core and coils, location and mounting accessories.

There are a few reasons why Allis-Chalmers distributes transformers for quiet neighbors in quiet neighborhoods. For more information, contact your nearby A.C. sales office, or write for specific bulletins: Bulletin 12-B-100-A - A.C.P. (Allis-Chalmers will personally distribute transformers to 100 kw. Bulletin 12-B-100-B - General description of complete A.C. power and distribution transformer line. Bulletin 12-B-100-C - Basic transformers, including standard "M" line and A.C.P. premium products.

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Readers of STANDARDIZATION—a uniquely concentrated audience—will be quick to recognize what "ASA," or "American Standard" in an ad means to them as product users.

STANDARDIZATION

At last
a SOUND-LEVEL METER
YOU CAN CARRY IN YOUR POCKET

Features

- ★ LIGHT WEIGHT
- ★ COMPACT
- ★ MEETS ASA REQUIREMENT

Weighting network, two pounds — 8 1/2 inches long and including all accessories, the Type 110-A offers a new measure and operating ease in sound level meter.

Designed by H. H. Scott, Inc.

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- Extensive range of earphones
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A Host of Uses

in engineering, selling, designing, building, testing, research and many others — the Type 110-A is an essential.

Type 110-A

PACKAGED ENGINEERING

Courtesy Hermon Hosmer Scott, Inc

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PACIFIC "RHE" Oil Circuit Breaker



TESTS AND PERFORMANCE

The RHE Oil Circuit Breaker is designed and tested in accordance with the requirements of the IEEE Standard for Oil Circuit Breakers.

The RHE Oil Circuit Breaker is available in ratings of 1500, 2500, 4000, 6000, 10,000, 15,000, 20,000, 25,000, 30,000, 35,000, 40,000, 45,000, 50,000, 60,000, 70,000, 80,000, 90,000, 100,000, 125,000, 150,000, 175,000, 200,000, 225,000, 250,000, 275,000, 300,000, 325,000, 350,000, 375,000, 400,000, 425,000, 450,000, 475,000, 500,000, 525,000, 550,000, 575,000, 600,000, 625,000, 650,000, 675,000, 700,000, 725,000, 750,000, 775,000, 800,000, 825,000, 850,000, 875,000, 900,000, 925,000, 950,000, 975,000, 1,000,000, 1,025,000, 1,050,000, 1,075,000, 1,100,000, 1,125,000, 1,150,000, 1,175,000, 1,200,000, 1,225,000, 1,250,000, 1,275,000, 1,300,000, 1,325,000, 1,350,000, 1,375,000, 1,400,000, 1,425,000, 1,450,000, 1,475,000, 1,500,000, 1,525,000, 1,550,000, 1,575,000, 1,600,000, 1,625,000, 1,650,000, 1,675,000, 1,700,000, 1,725,000, 1,750,000, 1,775,000, 1,800,000, 1,825,000, 1,850,000, 1,875,000, 1,900,000, 1,925,000, 1,950,000, 1,975,000, 2,000,000, 2,025,000, 2,050,000, 2,075,000, 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New National Safety Program

THE Bureau of Labor Standards of the U.S. Department of Labor has analyzed its functions and outlined a program of future activities for conservation of manpower. Primary purpose of the newly outlined program is to avoid duplication of safety services among the many Government agencies which may be created or expanded to deal with various phases of the manpower problem. The plans have been worked out with other Federal agencies concerned, especially the military services, and approved by them.

The Bureau's program recognizes the basic responsibility of state labor departments for the industrial safety of all workers employed within their borders. Therefore, the program will be carried out in collaboration with the state labor departments. The Bureau will also seek the cooperation

of management, labor, educational, insurance, and private safety organizations.

The Bureau's program consists of seven elements:

1. Assistance to States.—Instead of sending Federal safety technicians or inspectors into defense plants as was done during the last war, the Bureau will assign qualified safety promotion specialists as requested and needed by State labor departments to supplement their efforts. This will be done in recognition of the fact that State labor departments offer the best medium for reaching all plants in need of safety services. It also recognizes that staffs may not be large enough in many states to carry the added burden imposed by expanded defense production. The men assigned by the Bureau will work under the auspices of the State

labor commissioners and under general policies of the Bureau. They will assist the states in interpreting national needs and policies, in developing special industry and training programs and in providing technical safety consultation and promotional services to industry.

2. Accident Statistics.—In cooperation with State labor departments, the Bureau of Labor Statistics will extend its collection and analysis of injury frequency and causation statistics, particularly in defense industries. This will provide additional information for planning and operating the defense safety program and will develop information on a more detailed industry basis.

3. Special Industry Programs.—Special safety programs will be developed.
(Continued on page 96)

Security Demands Safe Practices

WORLD events have made industrial accident prevention "not only a very practical activity but one of the essential tools which we must use to maintain our national security, our economic well-being and possibly our individual freedom," Cyril Ainsworth, Technical Director of the American Standards Association, told the Governor's Safety Conference of Hawaii. Mr. Ainsworth attended the Conference, held late in October, 1950, on behalf of the Bureau of Labor Standards, U.S. Department of Labor.

Industrial accident prevention has been taken out of the realm of "the nice thing to do, the appropriate thing to do, the legal thing to do, and the good business thing to do, into the realm of the essential thing to do," Mr. Ainsworth said. "The continuance of the world emergency situation is going to place such a drain on the human resources of the nation that instead of there being an unemployment problem, it will be difficult if not impossible to find peo-

ple to perform the services essential to our living and security. Accident prevention in industry, on the street and in the home, now loses all the high-sounding phrases with which it has been surrounded, and much of the idealistic tinge with which some people have been wont to color it."

One person in the United States is being killed every 5.46 minutes, Mr. Ainsworth pointed out. He contrasted the civilian loss of more than 900 killed in the four days of the Fourth of July holiday, with the military losses of some 1200 killed, wounded and missing in the first four weeks of the Korean engagement. "Such a tragic situation cannot continue and permit any reasonable form of conservation of manpower," he declared.

Both labor and management have a responsibility to do something about it, Mr. Ainsworth pointed out. Labor has a responsibility to do all it can to make itself technically competent in the field of accident prevention and to insure that every worker

knows what the employer is doing for his protection. He called on labor to help every worker to know that his personal freedom, the security of the nation, and the survival of democracy demands that his work performance must not be interrupted by accidents, and that the work performance of others must not be endangered by carelessness, thoughtlessness, or careless habits of fellow workers.

Management has a responsibility to organize more effectively for accident prevention on an industry-wide basis, and more generally throughout small plants as well as large.

Industry-wide programs, centralized and planned through national trade associations, have paid untold dividends in a number of industries, Mr. Ainsworth declared. "One has only to examine the records of such industries as the Portland cement industry; the sand, stone, slag, and gravel industry; the iron and steel

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Correlating Committees Name Officers



H. P. Westman

THE correlating committees, which supervise and coordinate the work of ASA sectional committees in specific fields, have named their officers for the coming year.

The newly organized Drawings and Symbols Correlating Committee has elected H. P. Westman, editor of *Electrical Communication*, published by the International Telephone and Telegraph Corporation, as permanent chairman. Mr Westman had been serving as temporary chairman since the committee was organized in September, 1950. He has had long experience with technical publications and with the problems that arise from different usages in presentation of technical material. Mr Westman started his career as technical editor of QST, an amateur radio magazine published by the American Radio Relay League. For 13 years he was secretary of the Institute of Radio Engineers. During the war he was on the staff of the American Standards Association working on American War Standards for radio components. Since 1945 he has been with the International Telephone and Telegraph Corporation, and its publication *Electrical Communication*. (For a report of this committee's recent meeting, see page 98.)

Safety Code Correlating Committee

A new chairman and vice-chairman and members of its executive committee have been elected by the Safety Code Correlating Committee. Myron Park Davis, chief chemist and metallurgist, Otis Elevator Company, is chairman for 1951. Mr Davis represents the American Society for

Testing Materials. Arthur S. Johnson, Vice-President and Manager of the Engineering Department, American Mutual Liability Insurance Company of Boston, is vice-chairman. Mr Johnson represents the National Association of Mutual Casualty Companies.

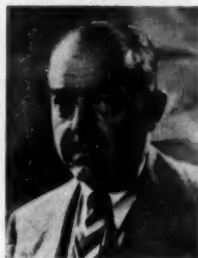
Mr Davis has taken an important part in work on industrial standardization for many years. He has been chairman of the Electrical Insulating Materials Committee of the American Society for Testing Materials, and is a member of ASTM committees on cast iron; petroleum products and lubricants; rubber products; and plastics. He is also a member of the American Chemical Society and the American Society of Metals. He has been a member of the Safety Code Correlating Committee representing the American Society for Testing Materials since 1946.

Myron Davis Accepts Chairmanship

In accepting the chairmanship of the committee, Mr Davis said: "The U.S. Bureau of Labor Statistics reports that work injuries have been increasing at a greater rate during 1950 than during any comparable period in the past seven years. This rapid rise indicates a need for wider use of safety standards that will put the protection of workmen on a uniform, recognized basis in order to reduce the unnecessary drain on manpower caused by industrial accidents.

"Some 150 American Safety Standards, representing a consensus of what is good safety practice and agreed upon by all groups concerned, are already at the service of industry. It is my hope, as chairman of the Safety Code Correlating Committee, that the record of the next year will show an even greater application of these American Standards for the prevention of industrial accidents."

Mr Johnson has shown an active interest in the national standardization work. He represents the National Association of Mutual Casualty Companies on the Standards Council



Myron Park Davis

as well as on the Safety Code Correlating Committee, and is a member of the nine-man Board of Review which expedites the work of the Council by acting for it on noncontroversial approvals of standards.

Members of the SCCC executive committee are: John A. Dickinson, Division of Building Technology, National Bureau of Standards; Elliott P. Knight, Superintendent of the Engineering Department, The Employers' Group, Boston, representing the Association of Casualty and Surety Companies, Accident Prevention Department; Harold L. Miner, representing the Manufacturing Chemists Association; R. C. Sogge, Manager, Standards Division, Executive Department, General Electric Company, representing National Electrical Manufacturers Association; William P. Yant, Director of Research, Mine Safety Appliances Company, Pittsburgh, representing the American Industrial Hygiene Association.

Other Correlating Committees

The Building Code and Construction Correlating Committee, the Mechanical Standards Committee, and the Mining Standardization Correlating Committee have re-elected their officers for the coming year. T. I. Coe, Technical Secretary, Department of Education and Research, The American Institute of Architects, is chairman of the BCCCC. Morgan Strong, Executive Secretary, Conference of Mayors and Other Municipal officials of the State of New York, is vice-chairman. Mr Strong represents the American Municipal Association.

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Recent Rulings on Unusual Accidents

How are unusual accidents to be counted in compiling a company's safety record? This is the question that constantly comes to the Committee of Judges, Sectional Committee Z16 on accident statistics, for decision. The Judges have ruled so far on some 140 cases. Sixty-six of these cases have already been published. Reprints are available from the American Standards Association. Cases 67 through 74 are reported below.

CASE 67. A company asked for decisions in regard to the inclusion of the following seven cases in their injury rates:

1. During the course of his regular patrol, a plant guard fell, injuring his left eye and breaking his glasses. The attending physician took three stitches in the eyelid and reported that the injured employee would probably be disabled for a week. The injured guard reported for work on the day following the incident, however, and stated that his eye felt "good" but he could not see properly without his glasses. It required four days, which he lost from work, to repair his glasses. At the expiration of this period he returned to his regular assignment.



The committee agreed that the injury should be classified as disabling, unless the physician changed his opinion and permitted the employee to return to work, as far as the effect of the injury was concerned, on the day following the date of the injury.

2. In the course of his regular employment, a storekeeper was checking materials in a bin while standing on a platform 7 inches high. The platform was provided for the purpose for which it was being

used, and the storekeeper had used it daily for a period of a year. In stepping off the platform, the employee alleged that he twisted his right foot, causing considerable swelling. The injured was not lifting or carrying any materials when the incident occurred. The attending physician told the injured storekeeper to stay off the foot for a couple of days and to soak it in hot water. However, since the injured man was the only storekeeper on duty at the time, he returned to work and worked two days until his supervisor returned from leave; then he was off two days as the doctor had previously prescribed.

The committee agreed that the lost time in this case should be counted in the rates.

3. A guard was performing his regular assigned duty of riding as an escort on a commercial 37-passenger bus through a restricted area to assure that unauthorized persons did not disembark within the area. On January 1, 1949, the employee alleged that he strained his back in getting back on the bus from a regular bus stop. Employee had been on duty 27 minutes when the injury is alleged to have occurred. He continued to work for two hours before reporting to the hospital. The attending physician told him to stay off for one day and recommended "muscular reconditioning." There is no history of the injured employee slipping or falling and it appears that he was entering the bus in a normal manner. He lost time for one day.

The committee agreed that if the description of this case, as given, was factual, then this should be considered a lost-time injury.

4. During the course of his regular employment, which required handling articles ranging in weight from 1 to 200 lb, a storekeeper was inventorying and re-warehousing material and equipment. In the process he stooped in the proper manner to pick up an item weighing approximately 20 lb. A few minutes later he complained of a pain in the lower part of his back to another employee who was assisting in the inventory. There is no history of a slip or over-exertion on the part of the injured employee. The attending physician diagnosed injury as a lumbosacral strain and advised hard bed, and flatiron massage with heating pads. Employee lost 6 days from work.

The committee agreed that anyone who handles weights up to 200 lb is likely to experience a back strain, and the fact that the last load lifted weighed only 20 lb, was hardly sufficient to exclude the injury. They agreed that the injury should be counted.

5. A rigger claimed that during the course of his regular employment, he strained a ligament in the right side of his neck while steadying a machine on a forklift truck. The injured was assisting another employee in balancing this machine on the forklift while loading the machine into a box car. The machine was a table saw weighing approximately 700 lb, which was well within the weight

limits regularly handled by riggers. There was no history of the machine slipping or tilting and the injured was walking beside the load to keep it from tilting when the injury was alleged to have happened. There was no history of the injured slipping or experiencing any abnormal movements. Employee lost 1 day from work.

The committee agreed that if the description of this case, as given, is factual, then this case should be considered a lost time injury.



6. During the performance of his regular assigned duties, which required the handling of materials ranging in weight from 20 lb to 1,000 lb, an employee was taking bolts from bins and putting them into kegs which are provided to transport quantities of bolts. After each keg was filled it was moved about three feet (on the same level) to make room for an empty keg. The employee had been performing this task for approximately 200 lb, which caused a pain in the left side of his back. The employee was lifting in a normal manner and there is no history of improper lifting or slipping. The injured employee informed his helper of the pain at the alleged time of the incident. This materials handler lost 2 days from work.

The committee agreed that this case should be included in the rates.

7. During the course of their regular employment, employees were cleaning up a warehouse yard and in the process were using a motor truck to snake some large timbers to a location for stacking. The supervisor gave a warning to all employees of the danger of getting too near or on the moving timbers. He also instructed the truck operator to stop the vehicle if anyone attempted to ride the timbers. The supervisor went on to some other part of the job. In spite of his warning, an employee attempted to ride the moving timbers. When the truck driver saw this, he stopped as instructed. This sudden stop threw the employee to the ground causing

bruises and lacerations of the right knee and left side of face, and resulting in 2 days lost time.

The committee agreed that this case should be included in the rates and called attention to the fact that disobedience of orders was not grounds for excluding an injury from the rates.

CASE 68. A company had several parking lots on the company premises, and also had a four-lane driveway leading from the entrance to the company properties to the various parking lots.

The parking lots were entirely unsupervised. Drivers parked in whichever lots they wished and in any locations they thought were most convenient. The parking lots were subject to periodic checks by Plant Protection to guard against petty theft, etc.

The four-lane driveway was a paved road with parkways leading from the entrance to the plant property to the various parking lots. Three lanes were used for incoming traffic at the peak load. Lane four was used for outgoing traffic only. At the end of the shifts, all four lanes were used for outgoing traffic. Three uniformed company patrolmen were stationed along this driveway during shift changes to keep traffic moving and to retard hazardous driving. They were not on duty at all times but only during the peak traffic loads, for directing purposes.

The company asked whether disabling injuries which occurred on the parking lots and on the driveway should be counted against the company's record.

In accordance with 2.1.3 of the standard the committee agreed that injuries occurring on the driveway should be counted, and injuries occurring on the parking lots should not be counted.

CASE 69. A textile concern had an employee with a history of sacroiliac trouble.

The trouble first occurred in the spring of 1944 and was severe enough to prevent work for one week. The employee stated that this resulted from lifting a warp beam, although the company could not locate an accident report concerning this.

While there was some pain from time to time, it was not of sufficient intensity to prevent work nor to induce the employee to consult a physician until February 1947. At this time he lost three days from work. There was no accident nor apparent cause for the condition on this occasion. His doctor recommended that he have his teeth extracted, which was done.

The trouble returned in February 1949, for no apparent cause, necessitating a loss of three days. On April 4, 1949 the employee made a normal step from the loom to the floor at which time the trouble returned, again necessitating the loss of three days.

The doctor informed the company that there was likely to be a recurrence at any time, even when doing normal walking, stooping, bending, or sitting.

Under these circumstances the company wanted to know whether or not the April 5th incident should be counted as a loss time accident since, according to his doctor, this employee might, for no reason at all, or for any one of many normal causes, have a recurrence of this condition.

The committee agreed that this case should not be counted on the basis that there had been no history of an accident which could have aggravated the pre-existing deficiency.

The Committee of Judges also suggested that in any future recurrence decision would have to be made on the individual circumstances as they might develop. If there was no history of an incident then the injury would not be counted, but if the injury was aggravated by a definite incident then it probably should be counted.



CASE 70. An employee's statement concerning an injury was as follows:

"Between 9:30 p.m. and 10 p.m., on April 5, 1949, I pushed a large stone jar which was mounted on a four-wheel car. This car runs on a track and was hard to push, even though this is the normal manner in which the cars are moved.

"While pushing the car I felt a sharp pain in my left side. The pain was so sudden and severe that I quit pushing and straightened up. I placed my left foot on the car to ease the pain and it went away in two or three minutes. I then pushed the car into final position. I went over and sat down for a few minutes. However, when I arose from the sitting position, I noticed a slight soreness in my side. I did not discuss this pain with anyone at that time. At about 10:50 p.m., I went to the locker room to bathe. I noticed a swollen area in my groin. I showed this place to a foreman and told him of the sharp pain. However, due to the fact that I had to catch a bus, I did not report to the Medical Department.

"On April 6, 1949, when I arose, my side was so sore that I could hardly move. But after I moved around a little, the soreness wore off to some extent. I reported to the plant at the Medical Department where it was discovered I had experienced a hernia."

Since the employee had been doing a normal job and since he did not fall, slip,

trip, etc., the company questioned if there had been a clear history of an accident in this hernia case to satisfy 2.2 (a) of the standard.

The committee agreed that this case should be counted on the basis that the work that this employee was doing at the time his accident occurred required severe physical exertion and that the employee's account of the occurrence was a sufficiently clear history of an accident.

CASE 71. Employee swallowed a fish bone while eating her lunch in the plant cafeteria. The only fish listed on the menu that day was mackerel. Employee was on her regularly scheduled lunch hour. Cafeteria was maintained on company property for the benefit of company employees. It was necessary for employee to go to hospital for removal of fish bone, and she did not return to work until 4 days later. The company wanted to know if this injury should be included in their rates.

The committee agreed that this case should not be counted in the rates. The principal reason for this decision was that the employee was not in the course of employment, as defined in paragraph 2.1.1 of the code, while on her lunch hour. It was also suggested that since the employee got this fish bone while eating it was questionable if this could be construed to be an accident arising out of her employment.

CASE 72. In May 1949 a foundry stated that an employee had been injured in September 1947 when a pot weighing 400 pounds had fallen on his leg, crushing it. After bone plating and numerous casts, the employee at that time was able to walk with the aid of a brace attached to the limb. The doctor believed that this employee would soon have full use of his leg. The company inquired whether it was supposed to charge the total number of calendar days of disability until the employee was able to return to work or whether only a certain percentage of the total number of lost-time days should be charged against its record. At that time the company was only operating 3 days per week and this employee had already lost approximately 600 calendar days.

The Committee agreed that if the employee regains full use of his leg, then the theoretical time charge for this accident should have been the total number of calendar days from the date of the injury until the date when this employee would be able to resume a regular job at the plant.

The Committee also called attention to Section 6 of the code. This injury should first have been charged to the month of September 1947, for monthly rates, in accordance with the estimated disability as of the 20th October of that year. In making up the 1947 yearly rates on February 1, 1948 the probable total extent of disability from this injury should have been estimated and these time charges should have been included in the report for the year 1947. Days lost as a result of this injury should not be shown in the rates for 1948 or for subsequent years. If at any time revised figures for the year 1947 are used, they should include the latest available in-

(Continued on page 99)

Standards From Other Countries

MEMBERS of the American Standards Association may borrow from the ASA Library copies of any of the following standards recently received from other countries. Orders may also be sent to the country of origin through the ASA office. The titles of the standards are given here in English, but the documents themselves are in the language of the country from which they were received.

For the convenience of our readers, the standards are listed under their general UDC classifications.

003.62 Signs, Notations, Symbols

CHILE	INDITECNOR
Fundamental Astronomical Symbols	2.2.2
Mathematical Symbols	2.2.3
Symbols of Financial Mathematics	2.2.6
Symbols for Usual Units of Measurement	2.2.5
POLAND	PN
Symbols Used in Tests for Resistance of Materials	N-01061
RUMANIA	STAS
Symbols Used in General Technics	895
CHILE	INDITECNOR
Preferred Numbers	2.4.2
RUMANIA	STAS
Preferred Sizes Over 500 mm for Mechanical Constructions	R 896
Inch - Millimeter Conversion Table	1255
SPAIN	UNE
Rounding of Numerical Values When Testing Materials	7018
URUGUAY	UNIT
Rounding of Numerical Values	68-50

513 Geometry

RUMANIA	STAS
Geometric Units	738

53 Physics and Mechanics

CHILE	INDITECNOR
Fundamental Units	2.4.6
Formation of Derived Units	2.4.7
Units of Length, Area, Volume and Capacity	2.4.11
Density and Specific Gravity	2.4.12
Units of Force and Pressure	2.4.13
Units of Energy and Power	2.4.14
Standard Temperature	2.4.1

Standard Temperature Scale	2.4.8
Reference Temperature	2.4.9
Temperature Conversion Tables	2.4.10
FRANCE	NF
Basic Terminology for Colours	X 08-001
POLAND	PN
Symbols Used in Mechanics	N-01060
RUMANIA	STAS
Mechanical Units	739
Photometric Units	740
Fundamental Units of Measurement	737
Viscosity. Terminology and Units	1080
Standard Temperature	1033

550.3 Geophysics

CHILE	INDITECNOR
Seismic Phenomena, Intensity Scale of	2.4.1

621.798 Packing and Despatch Equipment

CANADA	CSA
Moisture Vapor Barrier (Protective Packing)	Z 102.1-1950
DENMARK	DS
Packings for Frozen Food. General Methods	730
Packings for Frozen Food. Assembly Packings	731
Packings for Frozen Food. Three Sizes of Single Packages: 5-, 15-, and 25-Group	732.1/2/3
Packings for Frozen Food. Inside Dimensions for Frost Boxes, Containers for Transport and Smaller Frost Rooms	733
Packing Cases for Fruits, Types IA, IB and II	740/1/2
FRANCE	NF
Wooden Boxes, Crates, etc Terminology	H 03-001
Light Packing Baskets for Fruits and Vegetables	H 21-011
RUMANIA	STAS
Types of Wooden Packing Cases for Different Products	1247/8/50/1

621.8 Machine Parts. Hoisting and Conveying Machinery. Power Transmission. Means of Attachment. Lubrication

AUSTRIA	ÖNORM
Wood Screws, Countersunk Flat Head	M 5351
Wood Screws, Oval Head	M 5352
Wood Screws, Hexagonal Head	M 5353
Self-Tapping Screws, Filister Head	M 5360
Self-Tapping Screws, Oval Head	M 5361
Three Types of Knurling	M 1814
End-Threaded Rods, Metric Thread M 6-M 48	M 5030
Wing-Head Screws	M 5137

Knurled-Head Screws, Sizes M 1-M 10	M 5139
Wing Nuts	M 5224
Round-Head Rivets 1.9 mm Diameter	M 5310
Round-Head Rivets 10.43 mm Diameter	M 5311
Countersunk-Head Rivets	M 5315
Wood Screws, Round-Head	M 5350

CANADA CSA

Bolts, Cap Screws, Set Screws, Studs and Nuts	B33.1-1950
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FRANCE NF

Machine Screw, Pointed, Countersunk Side-Slotted Oval Head for Railroad Rolling Stock	F 03-011
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GERMANY DIN

Special Nuts with Various Threads Used in Locomotive Construction	30386/7
Hexagon Jam Nut, Fine Whitworth Thread	30397
Castel Hexagon Nut, Unslotted	35006
Flange Nuts	35338
Profile for Geared Tools for Involute Gears per DIN 867	3972
Plain Box-end Wrenches	3111
Table of Lifting Speed of Different Loads on Passenger and Freight Elevators	15301
Table of Diameters of Cables and Respective Pulleys of Passenger and Freight Elevators	15302
Space Washer	988
Basic Profile of Cutting Tool for Involute Splines	5482, B1.2
Truss-head Rivets	674
Whitworth Thread for Pipe Fittings	2999
Rollers for Conveyor Belt	22107
Shaft Retainer, Type "Bz"	6799

ITALY	UNI
Electric Portal Cranes, Three Types	3026/7/8

POLAND	PN
Mason's Steel Hooks, Fixed and Movable	B 59023/4
Nails for Roofing Paper	M 81003
Shoe Clasp	M 81022
Ceiling and Hinge Nails	M 81004, 81010
Shoemaker's Nails	M 81017/8/9/20

RUMANIA	STAS
Black Bolts, Hexagon Head, Metric Thread	920
Black Bolts, Hexagon Head, Whitworth Thread	921
Black Bolts, Countersunk Head	924
Carriage Bolts, Round Head	925
Metric Screw Thread, Fine-2	950
Metric Screw Thread, Fine-3	951
Keys, Tapered and Fixed	1007/8
Keyways for Tangential Keys	1010/1
Woodruff Keys	1012
Transmission Bearings. Oil-Ring Type	884
Toothed Racks	821
Preferred Gear Wheels	822
Leather Transmission Belts	615
Leather Transmission Belting, Vegetable and Mineral Tanned	758

Chrome-tanned Leather Belt-
ing Types F₁, F_{1.1} and F_{1.2}
Open Wrench, Single and
Double 581/2
Steel Rivets, Round Headed
Standard Metric Screw Thread
for Diameters from 72 to
400 mm 897
Oil-Cups, Wick Type 749
Gearing 915
Sheaves for V-Belts 1162
V-Belts, Shapes and Sizes 1164
Overhead Travelling Cranes,
Types and Characteristics 800
Overhead Travelling Crane,
Standard Spans 1100
Buttress Screw Thread 1090
Greasing Nipple 1116
V-Belt Transmissions, General
Metric Thread, General 981
Tinsmith Rivets 1257
Keys and Keyholes, Plain 1004
Plain Parallel Keys 1005

SWITZERLAND

VSM
Knurled-Head Screws, M3-
M10, Plain 12406
Knurled-Head Screws with a
Collar 12407
Knurled Nuts, M3-M10, Plain
Knurled-Head Screws, with a
Collar 12690
Tapered Pins 12691
Sheet-Metal Screws, Flat Head
Sheet-Metal Screws, Oval Head
Pitch of Straight and Cross-
Knurling 12770 b
12825
12826
34060

621.9 Machine Tools. Tools. Operations in Particular for Metal and Wood

AUSTRIA

ÖNORM
Side Milling Cutters, High
Speed M 4350
Twist Drills with Morse Taper
Shank M 4225

FRANCE

NF
Single Point Metal Cutting
Tools. Characteristics E 66-301

GERMANY

DIN
Shaft-End Centers 332.B1.3
T-slot 650
Nominal r.p.m. of Machine
Tool Shafts Under Full
Load. Tolerances 804

POLAND

PN
Taper Reamers M-59020
Drill Chucks, Two-Jaw M-60203
Jig and Work Holding
Clamps, Three Types M-61051/2/3
Shell Milling Cutter M-58960
Three-Jaw Drill Chuck M-60202
Tap and Reamer Wrenches M-62612/3
Drive Punch M-63483
Three Types of Plane Irons B-54670, 3-7
Wooden Crossbar Handle for
Augers D-54250
Gimlets D-54291, 4
Augers with Hole in the Shaft
for Crossbar D-54314/5
Gimlet with Square Tapered
Shank D-54331
Stock Drill Bits D-54340, 42
Tapered Shaft Ends of Grind-
ing Machines M-55070
Standard Diameters of Shaft
Holes of Milling Cutters M-55083
Different Types of Plyers N-56001/2/3/5/6
/8/12
Different Forms of Milling
Cutters M-57510 thru 57517
Reamers M-58998
Morse Taper Holding Sockets M-60212

Reducing Morse Taper Sockets
Plunger Type Presses

864/5/6

RUMANIA

STAS
Different Files 1001/2/3
Blades for Hand- and Me-
chanical Hack-Saws 1066/7
Grinding Wheels, Different
Forms 601-606
Straight and Tapered Shaft
Ends 717/8/9
Hand Taps for Normal Metric
Thread M1-M52 1112
Hand Taps for Inch Sizes
3/16"-2" 1113
Drill and Countersink Com-
bined 1114/5
Different Types of Machine-
Tool Handles and Levers 1130 thru 1133
Machine Taps, Normal Metric
Thread M1 to M52 1153/4
Machine Taps for Inch-Size
Thread 3/16" to 2" 1158/9
Round Dies 1160
Slot Cutter 1161
Reamers 1263/4/5/6
Types of Countersink Drills 1364/5/6
T-Bolts, Nuts and Washers 1386/7/8
Circular Saw for Metal 1159
Ordinary Ax, Ax Head 1184

SWITZERLAND

VSM
Grinding Discs, Two-side
Tapered 35331
Oval Handle for Hand
Wheels 16100 a
Fixed 16102 a
Ditto, Movable 16103 a
Tapered Hand-Levers for
Control Mechanisms 16104 a
Jig Bushings, Headless 34250
Jig Bushings, Head Type 34251
Jig Bushings, Renewable Type 34252

629.11 Land Vehicles. Transport Engineering

FRANCE

NF
Automobile Dashboard In-
struments R 142-06
Dynamo for Bicycle Lamps R 331-01

GERMANY

DIN
Nipples for Steel-Wire Con-
trol Cables 71988
Switch for Illuminated Turn
Indicators 72760.B1.1
Tumbler Switch 72761.B1.2
Ignition Switch and Lock 72762
Starter Push-Button 72764
Shaft-Ends of Auxiliary Ma-
chines 73031
Sprocket Wheel Teeth 73235
Tail Lamps 72625
Automobile Wheel Rims 7820
Binding Block for Car Wiring
System 72586
Car Wiring Diagram and
Binding Post Nomenclature 72552
Special Grooved Nuts 70852
Special Lock Washers 70952
Location of Clutch-, Brake-
and Accelerator-Pedals 73001
Air Filter Connector 73351
Exhaust Pipe Flanges 73362
Trailer Coupling Bars 74054
3 Types of Dimming Switches
for Automobiles 72758.B1.1-3
Spark Plugs, Types 18 and
14 72501/2
Ignition Coil 72531.B1.1,2
Spark Plug Cable Terminals 72566
Grease Fittings, Ball Type 71412
Tubing for Hydraulic Brakes 74225
Pins, Hollow 79141
Gaskets for Two-bolt Flanges
of Automobile Piping 71511

Ignition Coil for Passengers'

Cars and Trucks 72531.B1.3
Dimming Foot Operated Switch 72758
Hydraulic Brake Tubing 74234
Tires for Passenger Cars,
Delivery Trucks, etc 7803
Tires for Trucks, Buses, etc 7805.B1.2
Flat Rims for Motorcar and
Trailers 7819
Motorcars, General Typical
Diagrams 70020
Two-bolt Welded Flanges 71501
Different Types of Dynamos
for Automobiles 72411/2.B1.1,2
Two Types Voltage Regu-
lators 72420.B1.2,3
Lights Switch 72757.B1.2
Brake Lining 74263
Cooling Water Temperature
Indicator 75575
Two Types of Speedometers 75521.B1.1,2

RUMANIA

STAS
Bicycle Tire Valve 839
Automobile Tire Valve, Type
C 842
Valve for Motorcycle Inner
Tube 840
Screw Thread for Tire Valves 1270
Body of the Inner Tube Valve 841
Valve Cap 843

629.12 Ships and Shipbuilding

FRANCE

NF
Brackets for Ceramic and
Cast Iron Wash Basins J 35-54%
Siphon Connector for Wash
Basin J 35-562
Hat and Cloth Hooks J 36-240

POLAND

PN
Ship and Dock appliances W-89011/2-
such as mooring Bitts, sin-
gle, double, Cast Iron and 0-26/7/8/
Steel Cleats, single and 9-30/1/2/3,
double, Bollards, Chocks, 89035-89045,
plain, single, Roller Chocks, 89051-89056,
single and Multiples and 89061, 89066
details of above 7/8/9
89073-89099, 890102-89117, 89128-30/1
Roller Rope Guides W-89013, 15
Roller Chocks W-89022/3/4/5
Details of Roller Chocks W-89062/3/5

RUMANIA

STAS
Life-saving Rings and their
Supports 1182/3
Thimbles for Wire Rope 1262
Oar Locks 1382
Thimbles for Steel Ropes 1261
Rope Thimbles, General
Specifications 1383
Dinghy 1397
Rigging Screws, Turnbuckle,
etc 1105

SPAIN

UNE
Roller Chocks 27012
Double Chocks, Plain 27014
Cleats 27017
Mooring Pipes 27021

656 Transport Organization

UNION OF SOUTH AFRICA

SABS
Code of Practice for Group-
ing of Dangerous Com-
modities for Purpose of
Transportation 010-1950

669 Metallurgy

CANADA

CSA
Specification for Structural
Steel G 40, Series 1-6

FRANCE	NF
Chemical Analysis of Ferro- and Silico-Alloys Vanadium Contents	A 06-214
Non-Alloy Steel Cast Pieces	A 32-051
Determination of Tendency to Grow of Austenitic Grains in Steels	A 04-301
Metal Sheets Used for Construction of Magnetic Circuits in Electric Machines and Apparatus. Quality Specification. Dimension	A 36-302; A 46-302

GERMANY	DIN
Different Tests of Gray Iron	50108/9/0
Bronze and Red Brass	1705,B1.1.2
Zinc and Zinc Alloys	50116
Malleable Cast Iron. Tension Test	50149
Malleable Cast Iron	1692
Test-Pieces for Tension Test of Type Metal	50148
Steel Casting	1681

INDIA	IS
Specification for Tensile Testing of Ferrous Metals	223-1950
Specification for Pig Iron (Coke)	224-1950
Specification for Pig Iron (Charcoal)	225-1950
Specification for Structural Steel	226-1950
Specification for Grey Iron Castings	210

POLAND	PN
Non-ferrous Metals and Alloys Definitions	H-01705
Analysis of Iron Ore	H-04117/8
Carbon Steel Tool Bars of Different Sections	H-93216/7, 9, 21, 24

ROMANIA	STAS
Malleable Iron Casting. Classification	1095
Nickel Silver. Classification	1096
Carbon Steel for Forging	1097
Alloy Steel for Forging	1098
Raw Dolomite Used in Metallurgy	1136
Method for Bending Test of Metals	1177
Plates and Strips of Nickel Silver	1178
Round Wire for Steel Ropes	1298
Copper Ore, Method of Analysis	1273
Forging Steel	1299
Impact Test of Metals	1400
Gold and Silver. Method of Analysis	1082
Rolled Steel Sheets, Black, Pickled, Tin- and Zinc-coated	900
Hot Rolled Carbon Steel Sheets for Mechanical Constructions	901
Hot Rolled Steel Strips	908
Hot Rolled Steel Grooved Spring Strips	909
Agglomerate of Zinc	975
Copper Sheets for Locomotive Fire Boxes	1013
Terminology and Classification Worked on Steel Products	1014

SPAIN	UNE
Determination of Carbon Contents in Structural Steel	7014
Brinell Test of Structural Steel	7017
Heat Treatment of Steels	36006
High-Resistance Steel Alloys	36012
Case-hardening Steels	36013
High Quality Structural Steel	36020

Canada Organizes

(Continued from page 84)

(v) The standardization and certification of the scientific and technical apparatus and instruments for the Government service and for use in the industries of Canada; and the determination of the standards of quality of the materials used in the construction of public works and of the supplies used in the various branches of the Government service;

(vi) The investigation and standardization, at the request of any of the industries of Canada, of the materials which are or may be used in, or of the products of, the industries making such a request.

The Council's principal task, however, is the development of research facilities, including organization and supervision of research projects and laboratories for the fullest development of Canada's resources. Divisions now operating under the Council include: Physics and Engineering; Biology and Agriculture; Chemistry; Research Information; Mechanical Engineering; Building Research.

This latter has the National Building Code as one of its special responsibilities. It plans to keep the code, published in 1941, continually under revision and to publish whatever documents will assist in bringing about greater uniformity and high technical standards in local building codes.

CANADIAN GOVERNMENT SPECIFICATIONS BOARD COMMITTEES

Code Number	
1-GP	Paints and Pigments
2-GP	Soaps and Detergents
3-GP	Petroleum and Associated Products
4-GP	Textiles
5-GP	Leather
6-GP	Stationery Forms
7-GP	Editorial Practice
8-GP	Standard Testing Sieves
9-GP	Paper Quality
10-GP	Refractories
11-GP	Wood Preservation
12-GP	Safety Glass
13-GP	Fire Hose
14-GP	Thermometers
15-GP	Chemicals
16-GP	Road Materials
18-GP	Solid Fuels
20-GP	Rubber Products
22-GP	Brushes
23-GP	Metallizing
25-GP	Waxes and Polishes
27-GP	Electrical Insulating Varnishes
28-GP	Fire-Fighting Equipment
29-GP	Mineral Wool

30-GP	Abrasive Products
31-GP	Standardization of Corrosion Test Methods
32-GP	Food Commodities
33-GP	Drawing Practices
34-GP	Asbestos-Cement Products
35-GP	Bedding Materials
36-GP	Wiping Cloths
37-GP	Asphalt Waterproofing Compounds
38-GP	Military Clothing

Safety Program

(Continued from page 90)

opened in defense industries. After consultation with State labor department officials, Bureau safety technicians will survey the operations and hazards of typical plants in a defense industry, prepare this information on flow charts, and develop data on the control of specific hazards. State labor departments will promote the use of this material with plant management and labor officials.

4. Safety Training.—The Bureau will help to develop text materials and courses in industrial safety, in cooperation with state labor departments, the Office of Education, state and national vocational associations, engineering colleges, the Bureau of Apprenticeship, and others.

5. Technological Development.—New technical safety problems that arise because of the development of new machines, methods, products, and processes will be studied. Bureau technicians will develop data and standards for control of hazards.

6. Federal and Maritime Safety.—Recent transfers of functions to the Bureau carry responsibility to promote the safety and health of maritime and Federal civilian employees. "As the nation's largest employer," the Bureau comments, "the Federal Government should lead, not lag, in the conservation of its manpower."

7. Publications, Visual Aids, Promotion.—Technical and popular publications and visual aids to speed special industry and training programs and to control new technological hazards will be issued by the Bureau. All public media will be used in a general promotional program on the safety service, new problems, and progress toward effective controls.

What's New on American Standard Projects

Plumbing Code, A40

Sponsors: American Public Health Association; American Society of Mechanical Engineers

The coordinating committee of A40 has prepared a draft of a code which would coordinate, as far as possible, the requirements of the many local and national plumbing codes in use throughout the country. This draft is being distributed to the organizations represented on the A40 committee and to other organizations and individuals interested in the field. If this draft is found generally acceptable, the sponsors plan to submit it to ASA for approval as an American Standard. It will be a revision of the American Standard Plumbing Code, A40.7-1949.

The coordinating committee was appointed in 1949 after approval of the plumbing code, to study the various plumbing codes then in existence and recommend proposals to eliminate conflicts between them.

Refrigeration Nomenclature, B53

Sponsor: American Society of Refrigerating Engineers

Proposed standards on Graphical Symbols and on Abbreviations were published in the August 1950 issue of *Refrigerating Engineering* and will shortly be submitted for final approval to the ASA Committee B53 and to the ASRE.

The subcommittees on letter symbols and definitions were reorganized this fall. As a result, the proposed standard on letter symbols has been prepared and will be presented to the ASRE in the near future. Work is also progressing on the proposed definitions standard.

Machine Tool Electrical Standards, C74

Representatives of the automotive, telephone, electrical, and machine tool industries were present at a general conference, February 5, to discuss the Machine Tool Electrical

Standards submitted by the National Machine Tool Builders' Association for approval as American Standard. This standard was proposed as a revision of American War Standard, Machine Tool Electrical Standards, C74-1942.

The members of the automotive industry felt that the NMTBA standards were not adequate to cover their specialized requirements in the high-production industries. The Joint Industry Conference standards, developed by the automotive, and related industries, were discussed as a basis for an additional American Standard to take care of these specialized needs.

The Conference voted to ask the ASA staff to suggest the needed editorial changes in both the JIC and the NMTBA standards in order to qualify them for adoption as American Standard. The NMTBA standard covers electrical standards for machine tools for general industrial use, and the JIC standards cover electrical standards for industrial equipment for high-production industries. When the editorial suggestions are completed, and checked with NMTBA and JIC respectively, they will be forwarded for approval to all those who were invited to the conference regardless of whether or not they attended.

Nomenclature of Metal End Products

The Mechanical Standards Committee has just approved the request for organization of a sectional committee on Nomenclature for Metal End Products. The request for this project was made by the Company Member Conference, approved by the Standards Council, and handed to the MSC for action.

The American Society of Mechanical Engineers has been invited to act as sponsor for the project which is intended to cover standardization of nomenclature for bars, plates, strips, and sheets made of steel, copper, brass, aluminum, zinc, and nickel.

Vacuum Tubes for Industrial Purposes, C60

Sponsor: Joint Electron Tube Engineering Council

D. D. Knowles, Westinghouse Electric Corporation, Bloomfield, N. J. (representing the Joint Electron Tube Engineering Council) is the new chairman of this committee.

A. C. Gable, Electronics Division, General Electric Company, has been appointed as the fourth representative of the JETEC on the committee.

Rubber Protective Equipment for Electrical Workers, J6

Sponsors: American Society for Testing Materials; Edison Electric Institute

At a recent meeting of the subcommittee on rubber gloves, a draft was prepared on Specifications for Rubber Protective Equipment for Electrical Workers, Rubber Insulated Gloves; Class I, Proof Test 10,000 volts, 3 minutes; Class II, Proof Test 15,000 volts, 3 minutes; and Class III, 20,000 volts, 3 minutes.

This proposed standard provides specifications for the manufacturing, purchasing, and testing of these rubber gloves, and is intended as a revision of the present American Standard for Electrical Gloves (Voltage Rating of Gloves, 3000 Volts), C59. 12-1952 (ASTM D 120-40).

The draft is now being circulated to subcommittee members and if approved, will be sent to the full J6 committee.

Standardization in the Field of Library Work and Documentation, Z39

Sponsor: Council of National Library Associations

Sponsorship for the Z39 committee has been transferred to the Council of National Library Associations from the American Library Association. As sponsor, the CNLR will assume the leadership in cooperating on library standardization work, both national and international.

Letter Symbols and Abbreviations for Science and Engineering, Z10

Graphical Symbols and Abbreviations for Use on Drawings, Z32

Approval of recommended changes in sponsorship and scope for sectional committees Z10 and Z32 was given at a recent meeting of the Drawings and Symbols Correlating Committee. This proposal was part of the recommendations of the special Subcommittee on Relations between Z10 and Z32. The subcommittee had been appointed to "study the relationship of the work of committees Z10 and Z32 and to make recommendations as to any reorganization which might be found necessary for adequate handling of the assigned scopes." In order to carry out the work of these two sectional committees, the subcommittee also suggested organization of a third sectional committee. This committee will handle work on abbreviations formerly done by both Z10 and Z32.

The recommendations as approved by the DSCC for these three committees, their scopes, and sponsors, are as follows:

Z10—Letter Symbols

Scope: Standardization of letter symbols and signs for equations and formulas

Sponsor: American Society of Mechanical Engineers

Z32—Graphical Symbols and Designations

Scope: Standardization of graphical symbols, reference designations, and device function designations. The scope excludes terminal markings as covered by C6, and switchgear device function designations as covered by C37

Sponsors: American Institute of Electrical Engineers; American Society of Mechanical Engineers
New Sectional Committee on Abbreviations

Scope: Standardization of abbreviations

Sponsor: American Society of Mechanical Engineers

Rayon Fabrics, L22

Sponsor: National Retail Dry Goods Association

The Board of Directors of NRDGA has approved the proposed American Standards for rayon fabrics in

women's apparel, men's wear, and home furnishings, developed by committee L22. The board expressed the hope that manufacturers and producers will give the standards "careful consideration" in their production. The board also recommended that its action and the standards themselves be brought to the attention of the NRDGA membership.

On June 23, 1950 these standards were sent to the 32 national organizations that make up the L22 committee.

Home Cooking and Baking Utensils, Z61

Sponsor: American Home Economics Association

Miss Ellen-Ann Dunham, Director, Consumer Service Department, General Foods Corporation, was elected chairman by the committee at its last meeting in November, 1950.

The committee agreed that the scope of its work, subject to confirmation by the Consumer Goods Committee, will cover the development of specifications for baking and cooking utensils for the home, including dimensions, tolerances, terminology, safety, and quality.

Subcommittees were appointed to study important points developed during the discussion and to report recommendations to the sectional committee.

H. B. Ebert, Aluminum Cooking Utensils Company (representing the Aluminum Wares Association) was named chairman of a subcommittee to review round baking pans in the 8-inch class, including glass, tin, and aluminum. The subcommittee is to recommend whether all pans should be either 8 in. x 11¼ in. or 8 in. x 13¼ in. size, or both, with a tolerance of plus or minus ¼ in.

Miss Ruth Lundgren, representing the National Coffee Association, was named chairman of a subcommittee to investigate coffee makers and coffee pots, tea makers and tea pots to see what work has been done in standardization, how the maker is marked, and to review the viewpoints of manufacturers.

A third subcommittee will investigate pressure cookers and pressure canners and will confer with manufacturers about safety and quality as well as size. Miss Mildred G. Arnold, Revere Copper & Brass, Incorporated, is chairman.

Device Designations—

Reference designations and device function designations for use on drawings will be developed in two separate American Standards.

The report of a special subcommittee on device designations was presented to the Drawings and Symbols Correlating Committee at its recent meeting. The DSCC approved the recommendation that proposals of the Institute of Radio Engineers on reference designations, and the National Electrical Manufacturers Association on device function designations be processed into two separate American Standards. Recognition of the need for separate standards stemmed from the fact that each type of designation serves a specific but different basic purpose. Reference designations are used for explanatory and service purposes in the electronic industry to identify devices, while device function designations are used in the power field to designate function of a device rather than identity of a part.

Noting the close relationship between graphical symbols and designations, the DSCC voted to broaden the scope of Z32 to include standardization of such designations. In assigning consideration of these proposals to Z32, the DSCC suggested they be handled by subcommittee 2 on Electrical Graphical Symbols.

The special subcommittee on device designations was formed to study the IRE and NEMA proposals and report to the DSCC.

Committees on Photography

Designations have been assigned to the five sectional committees on photography.

Films, Plates, and Papers, PH1
Photographic Sensitometry, PH2
Photographic Apparatus, PH3
Photographic Processing, PH4
Motion Pictures, PH22 (formerly Z22)

Accidents

(Continued from page 93)

formation or estimated time charges for this case.

CASE 73. The injured employee (carpenter) was employed at a coal mine, and on the day of the injury had been assigned work on one of the company-owned residences in the mining village. He was transported from the time clock, or check-in location, by his foreman in a company-owned vehicle. He was instructed that he would be picked up by this same foreman at 2:00 p.m., when he would be returned to the time clock for checking out purposes by 2:15 p.m.

At about 1:50 p.m. the carpenter completed his work and elected to go on foot to the main office and get his pay check. It was the regular pay day at this location but pay checks were not to be issued prior to 2:15 p.m. At 2:00 p.m., while enroute to the main office, the employee was struck by an automobile, resulting in amputation of his right foot. Enroute to the main office the injured man passed by a road which led to the regular checking out point.

The company wished to know whether this injury could be construed as being a parallel to the example in Section 2, paragraph 2.1.3 of the standard concerning injuries occurring on parking lots.

The committee agreed that this case had no relation to parking lots and the injury should be counted in the rates.

CASE 74. The injured employee (electrical helper) was struck in the eye with a splatter of cement while the cement was being poured. The eye was washed out immediately and no apparent damage was experienced for several days. Several days after the accident the injured was referred to a doctor, who found that he had some slight irritation in this eye of a fungus nature and prescribed treatment which required placing a patch over the eye for a short time, perhaps a day or two. The attending physician was willing to return the employee to restricted duty but learned that he had extremely poor vision in his other eye—20/200. The physician advised that it would not be appropriate for the employee to continue to work, nor even to walk about the streets with such poor vision in his uninjured eye so long as the other eye had to remain bandaged.

The company wanted to know if the real cause of the inability to work was closely enough associated with the slight injury received to cause this to be classified as an "Industrial Injury" resulting in lost time. The company wondered if this case could not be construed as being parallel to one where the injured suffered serum sickness connected with a nail puncture, which in itself would not keep an employee from working, as mentioned in 3.6.1 of the standard.

The committee believed there was a causal relation between the irritation in the eye, which resulted in loss of time, and the accident, and, therefore, the case should be counted as a lost time injury. The Committee did not believe that the exception stated in 3.6.1 should be enlarged to include such a case.

Book Reviews



Model Code of Safety Regulations for Underground Work in Coal Mines for the Guidance of Governments and of the Coal-Mining Industry. (International Labor Office, 1825 Jefferson Place, N.W., Washington 6, D. C. 1950. \$2.00)

A Committee of Experts from coal-mining countries and a Committee of Electrical Experts worked with the ILO in preparing the first draft of this Model Code. Before publication, the draft was carefully studied and revised by a Tripartite Technical Conference of delegates from 15 coal-mining countries held at Geneva in September 1949. The Code is placed at the disposal of Governments and the coal-mining industry to use "as they think fit in framing or revising their own safety regulations." It is not an instrument involving any binding obligations. The 24 chapters cover every phase of coal mining from means of access and egress, explosives, and haulage of materials to precautions against firedamp and coal dust and transportation of workers on roads and inclines.

Technological Applications of Statistics. By L. H. C. Tippett. (John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, N. Y. \$3.50.)

A "write-up" of a series of lectures delivered at the Massachusetts Institute of Technology by an outstanding English statistician, this book is an introduction to statistical methods applied to technological problems. Part I concerns Routine Control of Quality and covers the measurement of quality, the theory of the control chart, practical application of the control chart procedure, the control of the fraction defective, special applications and adaptations of the control chart, and acceptance sampling. Part II treats Investigation and Experimentation and includes information on the statistical theory of errors, applications of the analysis of variance, applications of correlation analysis, and the planning of the investigation.

Modern Building Inspection. Compiled, edited, and arranged by R. C. Colling and Hal Colling. (Building Standards Monthly Publishing Company, 124 West Fourth Street, Los Angeles 13, California. 1951. \$10.00)

The second edition of this building officials textbook is a compilation of 18 chapters prepared by authorities in each field covered. Called the "most comprehensive work yet attempted to serve building officials, and to encourage uniformity of administration and interpretation," the book ranges from a history of building regulation through all phases of building department operations, technical building problems, responsibilities of building offi-

cials, and building code problems. It includes discussions on structural requirements of building codes, fire resistance of building constructions, occupancy requirements, building failures, resistance to wind and earthquake forces, and foundations and retaining walls. A discussion of failures that made repair of the White House necessary is an indication of the up-to-date material included. Work on the book has been done over a period of two years and has been aimed to provide building officials with an authoritative source and textbook covering all phases of building department operations in the office or in the field.

Industrial Accident Prevention. 3rd Edition. By H. W. Heinrich. (McGraw-Hill Book Company, 330 West 42nd Street, New York 18, N. Y. \$4.00)

Originally published in 1931 and revised in 1941, this book is now in its third edition. New material and some rearrangement of the text are features of the 1950 edition. New chapters have been included on motor-vehicle fleets; formula for supervision; personal protective devices; and a short-form safety course. In addition, new material has been added to several of the chapters. A cause code for analyzing boiler and machinery accidents is included for the first time and the author presents his own recommendations for the improvement of the American Recommended Practice for Compiling Industrial Accident Causes, Z16.2-1941.

The material is arranged as a textbook, and should be helpful to a student who is planning to enter the field of safety engineering. Because of its clear statement of fundamentals, it should also be of value to the practicing safety engineer.

Because so much space is devoted to fundamentals, the practicing safety engineer will find he also needs additional detailed information on individual subjects, such as that contained in the American Safety Standards.

The author has served on sectional committees under the procedures of the American Standards Association for many years. At present he represents the Accident Prevention Department of the Association of Casualty & Surety Companies on the following ASA sectional committees: Electrical Safety Code, C2; Inspection Requirements for Motor Vehicles, D7; Safety Code for Paper and Pulp Mills, P1; Methods of Recording and Compiling Accident Statistics, Z16; Performance Requirements for Protective Occupational Footwear, Z41. During the war, Mr. Heinrich also served as an individual member on the ASA War Committee on Protective Occupational Clothing, L18.

AMERICAN STANDARDS

Status as of February 7, 1951

Legend

Standards Council—Approval by Standards Council is final approval as American Standard; usually requires 4 weeks

Board of Review—Acts for Standards Council, gives final approval as American Standard; usually requires 2 weeks

Correlating Committees—Approve standards to send to Standards Council or Board of Review for final action; approval by correlating committee usually takes 4 weeks

Building

American Standards Just Published—

Specifications for Gypsum Plastering, A42.1-1950 (Revision of A42.1-1946) \$4.00
Specifications for Interior Lathing and Furring, A42.4-1950 (Revision of A42.1-1946) \$4.00
Sponsors: American Institute of Architects; American Society for Testing Materials

In Correlating Committee—

Specifications for Structural Clay-Bearing Wall Tile (Revision of ASTM C34-49; ASA A74.1-1950)
Specifications for Structural Non-Load-Bearing Tile (Revision of ASTM C56-49; ASA A76.1-1950)
Specifications for Structural Clay Floor Tile (Revision of ASTM C57-49; ASA A77.1-1950)
Methods of Sampling and Testing Brick (Revision of ASTM C67-44; ASA A82.1-1944)
Specifications for Gypsum (Revision of ASTM C22-41; ASA A49.1-1941)
Methods of Testing Gypsum and Gypsum Products (Revision of ASTM C26-42; ASA A70.1-1942)
Specifications for Gypsum Plasters (Revision of ASTM C28-40; ASA A49.3-1940)
Specifications for Gypsum Wall Board (Revision of ASTM C36-42; ASA A69.1-1942)
Specifications for Gypsum Lath (Revision of ASTM C37-42; ASA A67.1-1942)
Specifications for Gypsum Molding Plaster (Revision of ASTM C59-40; ASA A49.4-1940)
Specifications for Keene's Cement (Revision of ASTM C61-40; ASA A66.1-1941)
Specifications for Gypsum Sheathing Board (Revision of ASTM C79-42; ASA A68.1-1942)
Sponsor: American Society for Testing Materials
Preparation of Subfloors to Receive Oxychloride Composition Flooring, A88
General Purpose Oxychloride Composition Flooring and Its Installation, A88
Heavy Duty Oxychloride Composition Flooring and Its Installation, A88

Oxychloride Composition Basecoat Flooring and Its Installation, A88
Sponsors: National Bureau of Standards; American Society for Testing Materials

Submitted to ASA for Approval—

Pile Foundations and Pile Structures, A96
Sponsor: American Society of Civil Engineers

Withdrawal Being Considered by Board of Review—

Design for Joint Plates for Seven Inch Girder-Grooved and Guard Rails, E2-1923
Design for Joint Plates for Nine-Inch Girder-Grooved and Guard Rails, E3-1923
Design for Seven-Inch Girder-Grooved Rail, E4-1933
Design for Nine-Inch Girder-Grooved Rail, E5-1933
Design for Seven-Inch Girder Guard Rail, E6-1933
Design for Nine-Inch Girder Guard Rail, E7-1933
7-Inch 82 lb Plain Girder Rail and Splice Bars for Use in Paved Streets, E8-1933
7-Inch 92 lb Plain Girder Rail and Splice Bars for Use in Paved Streets, E9-1933
7-Inch 102 lb Plain Girder Rail and Splice Bars for Use in Paved Streets, E11-1933
Sponsor: American Transit Association

Reaffirmation Requested—

Specifications for Sieves for Testing Purposes (ASTM E11-39; ASA Z23.1-1939)
Sponsor: American Society for Testing Materials

Chemicals

In Correlating Committee—

Methods of Chemical Analysis of Yellow, Orange, Red, and Brown Pigments Containing Iron and Manganese (Revision of ASTM D50-36; ASA K44-1937)
Sponsor: American Society for Testing Materials

Consumer

American Standards Just Approved—

Colorfastness to Light (AATCC 16-45) L14.53-1951
Colorfastness of Acetate Rayons to Atmospheric Fumes (AATCC 23-46) L14.54-1951
Resistance of Textiles of Mildew and Rot, and Evaluation of Textile Fungicides (AATCC 30-46) L14.55-1951
Colorfastness to Perspiration (AATCC 15-45) L14.56-1951
Colorfastness to Chlorine Bleaching (AATCC 3-42) L14.57-1951
Colorfastness to Peroxide Bleaching (AATCC 29-45) L14.58-1951
Water Resistance of Fabrics—Resistance to Hydrostatic Pressure (AATCC 18-41) L14.59-1951
Resistance to Water Spray (AATCC 22-41) L14.60-1951
Resistance to Absorption of Water Dur-

ing Immersion (AATCC 21-41) L14.61-1951
Detection of Phototropism (AATCC 32-46) L14.62-1951
Colorfastness to Plecting (AATCC 31-46) L14.63-1951
Resistance of Textile Fabrics and Yarns to Insect Pests (AATCC 24-49) L14.64-1951
Evaluation of Insect Pest Deterrents on Textiles (AATCC 28-49) L14.65-1951
Specifications for Textile Testing Machines (ASTM D 76-49) L14.66-1951
Methods of Testing and Tolerances for Knit Goods (ASTM D 231-46) L14.67-1951
Definitions of Terms Relating to Textile Materials, L14.12-1951 (Revision of ASTM D 123-49; ASA L14.12-1949)
Methods of Testing and Tolerances for Cotton Yarns, L14.13-1951 (Revision of ASTM D 180-49T; ASA L14.13-1949)
Methods of Test for Asbestos Yarns, L14.18-1951 (Revision of ASTM D 299-49T; ASA L14.18-1949)
General Methods of Testing Cotton Fibers, L14.23-1951 (Revision of ASTM D 414-49T; ASA L14.23-1949)
Method of Test for Fiber Length of Wool, L14.32-1951 (Revision of ASTM D 519-49; ASA L14.32-1949)
Methods of Testing and Tolerances for Single Jute Yarn, L14.34-1951 (Revision of ASTM D 541-49; ASA L14.34-1949)
Methods of Testing and Tolerances for Glass Yarn, L14.36-1951 (Revision of ASTM D 578-49T; ASA L14.36-1949)
Methods of Testing and Tolerances for Woven Glass Fabrics, L14.37-1951 (Revision of ASTM D 579-49; ASA L14.37-1949)
Methods of Testing and Tolerances for Woven Glass Tapes, L14.38-1951 (Revision of ASTM D 580-49; ASA L14.38-1949)
Methods of Testing and Tolerances for Woven Glass Tubular Sleeveing and Braids, L14.39-1951 (Revision of ASTM D 581-49; ASA L14.39-1949)
Methods of Testing Felt, L14.52-1951 (Revision of ASTM D 461-49; ASA L14.52-1949)
General Methods of Testing Woven Textile Fabrics, L14.68-1951 (Revision of ASTM D 39-49; ASA L5-1939)
Sponsors: American Society for Testing Materials; American Association of Textile Chemists and Colorists

Electrical

American Standards Just Published—

Electrical Indicating Instruments, C39.1-1951 (Revision of C39.1-1949) \$1.60
Sponsor: Electrical Standards Committee

American Standards Just Approved—

Terminology for Piezoelectric Crystals (49 IRE 14.S1), ASA C16.17-1951
Methods of Testing Vehicular Communications Receivers (49 IRE 16.S1), ASA C16.18-1951
Methods of Testing Amplitude-Modulation Broadcast Receivers (48 IRE 17.S1), ASA C16.19-1951

Methods of Testing For Effects of Mistuning and Downward Modulation, (49 IRE 17.51), ASA C16.12a-1951, Supplement to American Standard Methods of Testing Frequency Modulation Broadcast Receivers, (47 IRE 17.51), ASA C16.12-1949

Methods of Measurement of Television Signal Levels, Resolution, and Timing of Video Switching Systems (50 IRE 23.51), ASA C16.20-1951

Sponsor: Institute of Radio Engineers

In Correlating Committee—

Sampling Electrical Insulating Oils, Method of Test (ASTM D 923-49; ASA C59.21)

Power Factor and Dielectric Constant of Electrical Insulating Oils of Petroleum Origin, Method of Test (ASTM D 924-49; ASA C59.22)

Gas Content of Insulating Oils, Method of Test (ASTM D 831-48; ASA C59.23)

Inorganic Chlorides and Sulfates in Insulating Oils, Method of Test (ASTM D 878-49; ASA C59.24)

Detection of Free Sulfur in Electrical Insulating Oils, Method of Test (ASTM D 981-48; ASA C59.25)

Natural Block Mica and Mica Films Suitable for Use in Fixed Micro-Dielectric Capacitors, Specification for (ASTM D 748-49; ASA C59.26)

NEMA Standards for Laminated Thermosetting Products (Revision of C59.16-1949)

Method of Testing Sheet and Plate Materials Used in Electrical Insulation (Revision of ASTM D 229-46; ASA C59.13-1948)

Sponsor: American Society for Testing Materials

Audiometers for General Diagnostic Purposes, Z24.5

Sponsor: Acoustical Society of America

Rolled Threads for Screw Shells of Electric Lamp Holders and Lamp Bases

Dimensional and Electrical Characteristics of 4-Watt T-5 Preheat Start Fluorescent Lamp, C78.400

Dimensional and Electrical Characteristics of 6-Watt T-5 Preheat Start Fluorescent Lamp, C78.401

Dimensional and Electrical Characteristics of 8-Watt T-5 Preheat Start Fluorescent Lamp, C78.402

Dimensional and Electrical Characteristics of 14-Watt T-12 Preheat Start Fluorescent Lamp, C78.403

Dimensional and Electrical Characteristics of 85-Watt T-17 Preheat Start Fluorescent Lamp, C78.409

Dimensional and Electrical Characteristics of 20-Watt T-12 Preheat Start Fluorescent Lamp, C78.406

Dimensional and Electrical Characteristics of 15-Watt T-8 Preheat Start Fluorescent Lamp, C78.404

Dimensional and Electrical Characteristics of 30-Watt T-8 Preheat Start Fluorescent Lamp, C78.407

Dimensional and Electrical Characteristics of 85-Watt T-17 Preheat Start Fluorescent Lamp, C78.409

Dimensional and Electrical Characteristics of 40-Watt T-12 Preheat Start Fluorescent Lamp, C78.408

Dimensional and Electrical Characteristics of 100-Watt T-17 Preheat Start Fluorescent Lamp, C78.410

Dimensional and Electrical Characteristics of 42-Inch T-6 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.801

Dimensional and Electrical Characteristics of 64-Inch T-6 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.803

Dimensional and Electrical Characteristics of 72-Inch T-8 and Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.805

Dimensional and Electrical Characteristics of 96-Inch T-8 Instant-Start Single-Pin Hot-Cathode Fluorescent Lamp, C78.807

Dimensional and Electrical Characteristics of 20-Millimeter 52-Inch Cold-Cathode Fluorescent Lamp, C78.1100

Dimensional and Electrical Characteristics of 20-Millimeter 64-Inch Cold-Cathode Fluorescent Lamp, C78.1101

Dimensional and Electrical Characteristics of 20-Millimeter 84-Inch Cold-Cathode Fluorescent Lamp, C78.1103

Dimensional and Electrical Characteristics of 20-Millimeter 76-Inch Cold-Cathode Fluorescent Lamp, C78.1102

Dimensional and Electrical Characteristics of 8-Watt T-5 Bactericidal Lamp, C78.1200

Dimensional and Electrical Characteristics of 15-Watt T-8 Bactericidal Lamp, C78.1201

Dimensional and Electrical Characteristics of 20-Millimeter 93-Inch Cold-Cathode Fluorescent Lamp, C78.1105

Dimensional and Electrical Characteristics of 30-Watt T-8 Bactericidal Lamp, C78.1202

Dimensional and Electrical Characteristics of 30-Watt Bactericidal Lamp, C78.1202

Sponsor: Electrical Standards Committee

Submitted to ASA for Approval—

National Electrical Code, C1 (Revision of C1-1946 and C1a-1949)

Sponsor: National Fire Protection Association

Gas Burning Appliances

American Standards Just Published—

Approval Requirements for Gas Water Heaters, Z21.10-1950 (Revision of Z21.10-1949) \$2.00

Addenda to Approval Requirements for Gas-Fired Room Heaters, Z21.11a-1950 (Revision of Z21.11-1949) \$4.00

Approval Requirements for Installation of Gas Equipment in Large Boilers, Z21.33-1950 (Revision of Z21.33-1922) \$1.00

Addenda to Approval Requirements for Central Heating Gas Appliances, Z21.13a-1940 (Revision of Z21.13-1945) \$5.00

Installation of Gas Piping and Gas Appliances in Buildings, Z21.30-1950 (Revision of K2-1927 and Z27-1933) \$2.25

Sponsor: American Gas Association

Highway Traffic

American Standard Just Published—

Specifications for Traffic-Actuated, Traffic Signal Controllers and Detectors, D13.1-1950 \$5.00

Sponsor: Institute of Traffic Engineers

Mechanical

American Standard Just Approved—

Code for Pressure Piping, B31.1-1951 (Revision of B31.1-1942)

Sponsor: American Society of Mechanical Engineers

In Board of Review—

Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe, B36.20 (Revision of ASTM A120-46; ASA G8.7-1947)

Sponsor: American Society for Testing Materials

In Correlating Committee—

Tolerances for Ball and Roller Bearings, B3.5

Sponsor: Mechanical Standards Committee

Specifications for Zinc Coated (Galvanized) Iron and Steel Sheets (Revision of ASTM A93-48; ASA G8.2-1949)

Specifications for Seamless Copper Water Tube (Revision of ASTM B88-49; ASA H23.1-1949)

Specifications for Brass Wire (Revision of ASTM B134-49; ASA H32.1-1949)

Specifications for Lead Red Brass (Hardness Bronze) Rods, Bars, and Shapes (Revision of ASTM B140-49; ASA H33.1-1949)

Sponsor: American Society for Testing Materials

Submitted to ASA for Approval—

Malleable Iron Screwed Fittings, 300 Lbs, B16.19

Sponsors: American Society of Mechanical Engineers; Heating, Piping, and Air Conditioning National Association; Manufacturers Standardization Society of the Valve and Fittings Industry

American Standard Withdrawn—

American War Standard Screw Threads of Truncated Whitworth Form, B1.6-1944

Sponsors: American Society of Mechanical Engineers; Society of Automotive Engineers

Mining

In Correlating Committee—

Tumbler Test for Coke (Revision of ASTM D 294-29; ASA K20.3-1936)

Sponsor: American Society for Testing Materials

Photography

American Standards Just Approved—

Dimensions for Photographic Dry Plates (Inch Size), Z38.1.30-1951 (Revision of Z38.1.30-1944)

Flash Synchronizing Equipment Bipost-Type Connecting Cord Ends and Pins, Z38.4.26-1951

Flash Synchronizing Equipment Bayonet-Type Connecting Cord Ends and Pins, Z38.4.27-1951

Sponsor: Optical Society of America

Safety

American Standard Just Published—

Code for Ventilation and Safe Operation of Open-Surface Tanks, Z9.1-1951 (Revision of Z9.1-1941) \$7.50

Sponsors: American Industrial Hygiene Association; American Society of Heating and Ventilating Engineers; National Association of Fan Manufacturers

In Board of Review—

Safety Code for Installing and Using Electrical Equipment in and About Coal Mines, M2.1 (Revision of M2-1926)

Sponsors: American Mining Congress; Bureau of Mines, U. S. Department of Interior

New Project Requested—

Anhydrous Ammonia and Ammonia Solutions
Requested by: Compressed Gas Association

News Briefs

• • Uniform Traffic Signals—

Carrying standardization in the traffic field one step further, the American Standards Association has approved a third standard in a series on traffic signal controls developed through the work of the Institute of Traffic Engineers. The most recent standard in the series is American Standard for Traffic-Actuated Traffic Signal Controllers and Detectors, D13.1-1950.

Purpose of this series of standards is uniformity, to prevent confusion in traffic signals from one community to another. The new document provides specifications for traffic controllers and detectors that are operated by the traffic itself—either pedestrian or automotive. General design requirements cover mid-block and intersectional pedestrian-actuated controllers; vehicle and pedestrian semi-attached controllers; basic type two-traffic-phase controllers; intersectional two-traffic-phase speed controllers; traffic density type, two, three, and multi-traffic phase actuated controllers; and non-intersectional traffic-actuated speed controllers.

Magnetic vehicle detectors, magnetic detector amplifiers, and pressure-sensitive vehicle detectors are also covered.

The standard also contains a list of definitions of terms, and in many cases gives optional methods of control.

A committee of the Institute of Traffic Engineers developed this standard. The two other standards in this series are: Adjustable Face Traffic Control Signal Head Standards, D10.1-1942; and Pre-Timed, Fixed Cycle, Traffic Signal Controllers, D11.1-1943.

Copies of the American Standard for Traffic-Actuated Traffic Signal Controllers and Detectors, D13.1-1950, may be obtained at 50 cents per copy.

• • **ASTM Exposure Tests**—A billion dollars is a conservative estimate of the loss each year due to the corrosion of metals, the American Society for Testing Materials declares in a recent report on its program for exposure tests. The effects of atmospheric deterioration on plastics, rubber, textiles, wood, and other engineering materials would more than double this figure, ASTM estimates.

The Society's program of exposure tests goes back some 40 years and has provided information that has been used by many committees in developing standards for materials and for protective coatings.

The ASTM report, *Exposure Test Site Program*, outlines the history of the program and its results. On the basis of the results obtained, the Society is appealing for financial support as well as technical support for the program from the ASTM membership and from industry generally.

Plans for the future call for seven new test sites to check on a wide range of atmospheric conditions. The sites chosen include industrial atmosphere, semi-industrial atmosphere, and several underwater sites.

The cost of acquiring, maintaining, and supervising the ASTM Exposure Test Sites for the first ten years is estimated to be at least \$100,000. This includes cost of equipping the sites with all test facilities, enclosing them where necessary, and providing a qualified engineer from the Society headquarters staff to give the necessary technical supervision and to service the sites and test specimens.

• • Uniformity for Indexes—

Steps are being taken to eliminate duplication of work by government agencies in preparing and distributing indexes and abstracts of technical and research material. A report of the progress already made by defense groups responsible for keeping government contractors informed of new scientific and technical material was presented at a Symposium in New York January 29. The Symposium was sponsored by the Institute of the Aeronautical Sciences Libraries and the Special Libraries Association. Dr Eugene W. Scott, Executive Secre-

tary of the Interdepartmental Committee on Scientific Research and Development, was chairman.

Speakers included E. Eugene Miller, chief of the Division of Research Information of the National Advisory Committee for Aeronautics; Dr Dwight E. Gray, chief of the Navy Research Section, Library of Congress; Colonel A. A. Arnheim, director of the Central Air Documents Office; and Dr Mortimer Taube, Deputy Chief, Technical Information Service, Atomic Energy Commission.

These men and their staffs make up the Group for Standardization in Information Services. This Group has already agreed on a standard catalog card and on standard indexing methods that will permit each agency to interfile the index cards of the other agencies. Nonstandard practices frequently make it necessary for contractors and government organizations to reprocess each others' reports and catalog cards, it was said.

Abbreviations for Drawings

• • A revised edition of the American Standard Abbreviations for Use on Drawings has just been published by the American Standards Association.

To bring the 1946 edition of the standard up to date with latest industry-wide practice a committee representing technical associations, industry, government and independent experts developed this edition. It will greatly aid draftsmen, shopmen, assemblers, and construction men in interpreting industrial drawings done by various companies and branches of the government.

This 1950 edition contains special new sections on abbreviations for colors, valves, and screw threads. The section on abbreviations and letter symbols for cable and magnet wire has been greatly enlarged to include colors of cable and magnet wire.

Over 200 changes have been made in the abbreviations included in the original edition, and more than 40 new abbreviations have now been incorporated.

The committee developing this standard was jointly sponsored by the American Institute of Electrical

Engineers and the American Society of Mechanical Engineers under the procedures of the American Standards Association. In preparing the new edition, the committee gave primary consideration to suggested changes and additions volunteered by users of the 1946 edition of the standard. Collaboration with the Munitions Board Standardizing Agency of the Department of Defense was maintained at all times. Complete agreement on all common words is expected between this standard and the military standard when MIL-STD-12A is approved.

Copies of the American Standard Abbreviations for Use on Drawings, Z32.13-1950, may be obtained from the American Standards Association at \$1.00 per copy.

Anhydrous Ammonia and Ammonia Solutions—

At a conference February 7, groups concerned with the manufacture, distribution, and use of anhydrous ammonia and ammonia solutions recommended that the American Standards Association organize a committee to develop safety standards. They proposed that the work cover design, construction, location, installation, and operation of anhydrous ammonia systems as well as transportation and storage of anhydrous ammonia and ammonia solutions. Ammonia manufacturing plants, refrigerating, and air conditioning systems would not be included.

The conference recommended that the Compressed Gas Association be asked to sponsor this work.

The problems of handling and storing anhydrous ammonia have assumed nationwide importance because of the increasingly widespread use of this gas as a soil fertilizer. Since anhydrous ammonia is usually transported in liquid form under pressure in tanks or cylinders, the relation between the strength of the tank and the pressure and temperature under which the gas is handled will be one of the problems to be given careful consideration.

The need for this work was called to the attention of the American Standards Association by the Compressed Gas Association which has offered its standards for the storage and handling of anhydrous ammonia and ammonia solutions for the committee's use.

The recommendations of the conference will be referred to the Safety Code Correlating Committee of the American Standards Association for final action.

Groups represented at the conference were: American Institute of Chemical Engineers; ASA Chemical Industry Correlating Committee; American Society of Refrigerating Engineers; American Water Works Association; Association of Casualty and Surety Companies; Compressed Gas Association; Interstate Commerce Commission; Manufacturing Chemists Association; National Safety Council; U.S. Coast Guard; U.S. Department of Labor, Division of Labor Standards.

Security Demands

(Continued from page 90)

industry, and a number of others to see the importance of an industry-wide program," he said. "The frequency and severity rates of such industries are so far below the national average as to make the average blush with shame. There is no doubt but that an individual plant can do excellent work by and of itself but the stimulation which comes with group work, the pooling of experiences and ideas, and the opportunities for comparison with the progress of others puts a drive into the work that produces results."

The bulk of employment in this country is in the small plant, Mr. Ainsworth explained. "Employment in the small plant is the manpower pool available to those industries which, under the present emergency, may be called upon for exceptional production service. The building of a well-trained, understanding, and sympathetic manpower supply through small plant accident prevention work would seem to be not only good business but also the best possible community service."

Correlating Committees

(Continued from page 91)

Frank T. Ward, representing the American Transit Association, is chairman of the Mechanical Standards Committee, with L. W. Kattelle, assistant chief engineer, Walworth Company, as vice-chairman. Mr. Kattelle represents the Manufacturers Standardization Society of the Valve and Fittings Industry.

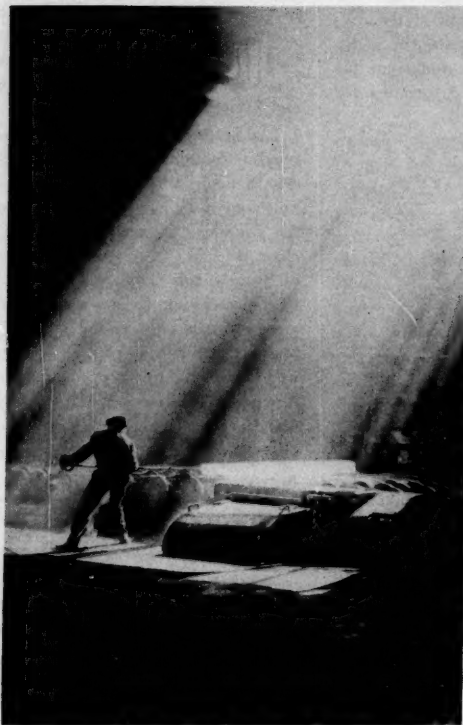
The Mining Standardization Correlating Committee has re-elected Lucien Eaton, Consulting Engineer of Milton, Massachusetts, representing the American Mining Congress, as chairman. M. D. Cooper, manager of Vocational Training, National Coal Association, has been re-elected vice-chairman representing the coal-mining interests; and B. F. Tillson, Consulting Engineer, representing the American Institute of Mining and Metallurgical Engineers, as vice-chairman representing the metal mining interests.

Copper Resistivity

(Continued from page 86)

ductivity of commercial copper only to 0.1 per cent, whereas the difference between the absolute and the international ohm is only 0.05 per cent. This difference is small in comparison with variations among the different lots of copper. For example, when measurements were being made at the National Bureau of Standards of the United States to provide a basis for a standard value, samples of copper from 14 producers in 4 countries differed, on the average, from the mean of all by 0.26 per cent, and the value which was accepted as standard in 1913 exceeded the mean resistivity of the 14 lots by more than 0.2 per cent. Consequently, the reduction of 0.05 per cent in the magnitude of the ohm with a corresponding increase in the resistivity to be reported for a given sample, really brings the standard value somewhat nearer to the average resistivity of the samples which were investigated.

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Roger Gay, President, Bristol Brass Corporation

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Brigadier General Donald Armstrong (USA, ret), President, U. S. Pipe and Foundry Company
Rear Admiral M. L. Ring (SC), USN, Director, Supply Management, Munitions Board
Howard Conley, Conservation Consultant, National Security Resources Board
John C. Green, Director of the Office of Technical Services, U. S. Department of Commerce
Willis S. MacLeod, Director, Standards Division, Federal Supply Service

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George M. Rice, Purchasing Department, Lincoln Mercury Division, Ford Motor Company
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The FTC's Search for a New Role

The Honorable Lowell B. Mason, member, Federal Trade Commission

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